

Research Article

Revitalizing community forestry in the Amhara Region of Ethiopia: A property right perspective

Tadesse Amsalu

Institute of Land Administration, Bahir Dar University, Bahir Dar, Ethiopia

Corresponding author: tadamsbir@gmail.com

Received: July 23, 2023; Received in revised form: November 13, 2023; Accepted: November 23, 2023

Abstract: *Severe deforestation, land degradation, and the lack of forest products in Ethiopia have necessitated the implementation of a community forestry program since the 1980s by mobilizing the local communities. However, there have been incidents indicating that many of the community forests are either degrading or remaining unproductive. While community forests are, in principle, the collective property of the local community, empirical evidence concerning how property rights impact their management and their role in enhancing rural livelihoods and environmental rehabilitation is lacking. This study aims to investigate the performance of community forestry through the lens of property rights and tenure security, in order to uncover the challenges impeding community forestry in Ethiopia, with a focus on community forests in the Amhara Region. The study gathered primary data on community forest management from two community forests located in East Gojam and North Wollo, using questionnaires, focus group discussions, key informant interviews, and field observations. Additionally, secondary data on legal frameworks were collected from institutions involved in community forestry. The data analysis employed descriptive statistics and thematic analysis. The findings of the study revealed that a majority of respondents (91%) lacked clarity regarding the objectives of establishing community forests, and about 95% claimed that community forests belong to the state. These incidents have led to diminished interest in continuing the program. The study highlighted that the community forestry program suffers from inadequate policy and legal provisions, chronic institutional instability, overlapping mandates, and limited community engagement. These factors have weakened property rights, which are reflected in tenure insecurity and the absence of individual household benefit packages. Consequently, it can be concluded that community forest interventions have been promoted based on general belief in the importance of trees for rural livelihoods and ecosystem rehabilitation, rather than as part of a deliberate and directed policy and strategy. In summary, revitalizing community forestry in Ethiopia necessitates a thorough understanding of property rights and tenure security issues. In this regard, it is imperative for government agencies to enact a clear national strategy for community forestry development and adopt a supportive role to enable communities to establish robust community forestry institutions to safeguard their rights while fostering community forestry and environmental protection activities.*

Keywords: Community forestry, community participation, property rights, tenure security

Citation: Amsalu, T. (2023). Revitalizing community forestry in the Amhara Region of Ethiopia: A property right perspective. J. Agric. Environ. Sci. 8(2): 70-90. <https://dx.doi.org/10.4314/jaes/v8i2.5>



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

1. Introduction

1.1. Background and justification

Throughout history, trees and forests have played a pivotal role in human well-being, providing invaluable resources and ecosystem services. Globally, millions of people rely directly or indirectly on forest resources for their livelihoods (FAO, 2014; Pimentel *et al.*, 1997). Trees offer numerous benefits to farming systems and farmer welfare, by enhancing farmland productivity through nitrogen fixation, watershed protection, water infiltration, and soil erosion control while conserving moisture. They also provide fodder and shelter for livestock, and their wood and non-wood products serve as crucial resources for household consumption and income generation. However, these benefits to rural livelihoods are greatly diminished or lost entirely in the face of severe deforestation and forest degradation.

Widespread environmental degradation and wood shortages afflict many developing countries heavily reliant on subsistence agriculture, including Ethiopia. In the 1990s, Ethiopia experienced an estimated annual deforestation rate of 150,000 to 200,000 hectares (EFAP, 1994). Another estimate by FAO (2007) indicates a deforestation rate of 1,410 km² per year, and the problem still persists. This alarming trend exposes farmlands to soil erosion and degradation, leading to reduced agricultural productivity, heightened food insecurity, and increased rural poverty.

Governments worldwide have attempted to conserve forest resources by designating woodlands as state forests or national parks (Baland and Plateau, 1996). However, this approach often conflicts with the interests of local communities and has yielded limited success. Following the 1992 Earth Summit, policies shifted towards strategies that recognize local communities as major stakeholders in the sustainable management of natural resources. Many countries are attempting to implement community-based natural resources management programs by establishing or developing state and community institutions (Hobley, 1996; Baland and Plateau, 1996; Gilmour, 2016), or through various efforts such as social forestry, community forestry, family forestry, agroforestry, farm forestry, and protection forestry (Arnold, 1992).

In Ethiopia, community forestry has been adopted as a strategy since the late 1970s, encompassing tree plantings on communal lands, woodlot establishment, conservation/protection plantations on watersheds, and the management of natural woodlands (Mengistu, 2002). Acknowledging that traditional plantation approaches alone cannot effectively address the diverse challenges of deforestation faced by rural communities, a forestry strategy promoting the creation and maintenance of evenly distributed woody resources, such as community forests including woodlots integrated within existing land use patterns, holds greater promise (Gilmour, 2016).

Ethiopia's environmental policy emphasizes the need to conserve both wild and domesticated biological diversity (EPA, 1997). The country's national conservation strategy (NCS) aims to protect natural forests, expand protected areas, safeguard endemic and unique species, ecosystems, and watersheds, and enable sustainable wood production (NCS, 1997). However, despite these policies and strategies, Ethiopia's vegetation continues to be overexploited. Factors such as land scarcity, undefined property rights, weak forestry institutions, population growth, and poverty contribute to increased pressure on forests and woodlands (Forum for Environment, 2011). Given Ethiopia's predominantly subsistence-based economy, ensuring food security necessitates the protection, conservation, and sustainable utilization of its environmental resources.

Recognizing the challenges and positive contributions of the forestry sub-sector, the Ethiopian government is committed to strengthening the forest sector's contribution to sustainable socio-economic growth through environmental sustainability. In 2018, a national forest sector development program was established, accompanied by a new forest proclamation in the same year (Proclamation No. 1065/2018). These initiatives reflect the government's determination to address critical forestry issues and promote sustainable forest management practices. Policy implementation outcomes occur through the interplay between the political interests and power relationships of actors within the underlying institutional arrangements (Li and Marafa, 2022). This assertion needs to be taken into account in the

process of implementing the community forestry program.

Despite commendable efforts by the Ethiopian government to promote community forestry development, the current state of community forestry either remains stagnant or experiences a declining trend. The pressing issues related to forestry development underscore the urgent need to address deforestation and promote sustainable forest management in Ethiopia, including the Amhara region. In this regard, revitalizing community forestry through a land rights/property rights approach is deemed crucial for ensuring the sustainable use of forest resources, empowering local communities, and mitigating the negative socio-economic and environmental impacts of deforestation. Strengthening community participation, enhancing governance structures, and promoting capacity-building initiatives can create an enabling environment for sustainable community forest management, ultimately improving livelihoods, reducing poverty, and conserving the region's invaluable forest ecosystems. Given this context, the study aims to investigate the performance of community forestry practices in the Amhara region of Ethiopia focusing on the devolution of community forest management, community participation, forest property rights, tenure security and institutional arrangements. The study intends to propose strategies for revitalizing community forestry interventions so that policymakers can make informed decisions that foster community forestry development in the country.

1.2. Theoretical framework: Mirroring community forestry in the light of property rights and tenure security

Community forests are established on communal land, and in principle, local communities are given rights over the management of the resources. However, this becomes a reality when there is a clear articulation of who has what rights to which property (Toulmin, 2009; Hizkia, 2016; Dahal *et al.*, 2017; Kelley and Graglia, 2017). According to USAID (2006), property rights related to a unit of land and associated natural resources can include the right to use, the right to manage, the right to transfer use and management rights, and the right to own. Applying

these vital elements of property rights in community-based forest development activities has enabled local communities to achieve better performances (Hizkia, 2016; Kusters and de Graaf, 2019; Kusters *et al.*, 2022).

Historically, formalizing property rights has correlated with increased economic prosperity, security, and societal resilience (Kelley and Graglia, 2017). Formal claims to property, whether land or forest, empower individuals or community members, including women, to benefit economically through property sales or relocation for employment opportunities. Formalizing property rights facilitates raising capital using property as collateral (Dale and McLaughlin, 2000) and encourages owners to invest in their property with confidence in capturing returns through sales or rent. Conversely, uncertain land and forest claims prompt resource exploitation, leading to extensive land degradation and deforestation.

Moreover, formalizing property rights positively affects environmental protection (Ojanen *et al.*, 2017). When individuals and communities have formal property rights, they are more likely to take care of their land and make improvements, such as tree planting and soil and water conservation. For instance, in Indonesia, Sembungan villagers, upon receiving property rights in the rainforest from the government, initiated a reforestation program to preserve and restore forests (Hizkia, 2016).

The formalization of property rights remains an important goal that can lead to more prosperous societies, with significant implications for community-based natural resources development (Cronkleton and Larson, 2015; Kusters and de Graaf, 2019). Forest tenure reforms globally recognize that enhancing tenure security is pivotal for ensuring property rights, resolving resource governance challenges, addressing deforestation, and contributing to poverty alleviation (Sunderlin *et al.*, 2008; Larson and Dahal, 2012). Forest tenure reforms entail shifts in rights, responsibilities, and powers concerning forest resources due to changes in statutory regulations governing forests or forest lands (Larson *et al.*, 2010; FAO, 2011). These changes entail demarcation of the forest land, clarifying and registering and redistributing rights over forests,

previously held by the state, and formally recognizing communities residing in and around forests for generations (Larson and Dahal, 2012, Aggarwal *et al.*, 2021).

Tenure security stands as a fundamental requirement to unlock the ecological and economic potential of community forestry, and it facilitates the conservation, management, and utilization of forest resources (Dahal *et al.*, 2017). The Food and Agriculture Organization (FAO, 2002) defines tenure security as "the degree of confidence that land users will not be arbitrarily deprived of the bundle of rights they have over particular lands". Similarly, Mwangi and Meinzen-Dick (2009) express tenure security as the practice of rights, referring to "the ability of an individual to appropriate resources on a continuous basis, free from imposition, dispute, or approbation from outside sources". Conversely, insecurity of tenure arises when tenure rights are precarious due to the risk of dispossession by other individuals, communities, or the state. Doss and Meinzen-Dick (2020) acknowledging the definitions given on tenure security, emphasize the importance of focusing on the content, duration, and robustness of rights. USAID (2006) also underlines that tenure security is characterized by four elements including legitimacy, institutional backing, clarity, and excludability. Other scholars highlight the importance of societal recognition and perception of property rights, as well as the role of authority relations, institutions, and social dynamics in determining tenure security (Cronkleton and Larson, 2015; Valkonen, 2021). Applying the core values of tenure security and property rights motivates right-holders in community forestry to develop a strong sense of ownership and make concerted efforts to improve forest productivity (Larson, *et al.*, 2023). However, decisions on resource access and usage affect multiple stakeholders with divergent and often conflicting interests (Li and Marafa, 2022). Hence, clearly defining forest property and tenure rights from the outset by considering the varied interests among stakeholders, including different interests of the state and local communities improves the prospects of success for community forestry initiatives. Efforts in numerous countries focus on formalizing tenure security through demarcation, clarification, and registration of rights (Aggarwal *et al.*, 2021).

Nevertheless, concerns persist that certification alone may not ensure tenure security without robust institutional support (Valkonen, 2021). Contextual factors like political conditions and historical land tenure systems influence the effectiveness of formalization policies (Peluso *et al.*, 2013).

Uncertain tenure and overlapping rights in many countries lead to conflicts, forest and land degradation, disproportionately affecting marginalized groups. Clear and secure rights support local livelihoods and enable communities to manage forest landscapes sustainably (FAO, 2011). Recognizing community-based forestry as a formal type of forestry stems from the narrative proposed by Ostrom (1990), suggesting that granting sufficient property rights over local forest commons enables communities to autonomously organize and sustainably manage natural resources.

Community forestry is a rural development activity that relies on local-level organizations and active engagement of community members. These organizations play a crucial role in building trust between communities and forestry services, facilitating access to resources, and fostering capacity building and skill development through external resource mobilization. They also safeguard the rights of members, promote participatory planning, research, and extension, and ensure effective monitoring of community and private forestry activities (Toulmin, 2009).

Robust institutions and rights to commercial forest use are vital for community-based forestry (CBF) to generate meaningful income and contribute to poverty reduction beyond subsistence levels (Schreckenber and Luttrell, 2009). Weak institutional development hinders the implementation of effective community forestry programs. Communities with communal rule-making traditions are better poised to develop effective institutional arrangements, having a deeper understanding of institution-building costs, benefits, and techniques (Ostrom, 1990). However, achieving successful local solutions for natural resource management becomes challenging in areas experiencing rapid demographic change, diverse interests, limited local autonomy, or

with resources extending beyond immediate communities.

Professionals in community forestry and natural resource governance aim to comprehend how institutional arrangements affect people's interactions with the environment, as these interactions have direct implications for forest conservation (Shrestha, and McManus. 2008). Institutional incentives play a crucial role in this regard, as rules create motivating factors that encourage certain behaviours while discouraging or penalizing others. Depending on the incentives and disincentives they face, individuals will engage in activities that either protect and nurture forest resources or harm them (Adhikari, *et al.*, 2015). Overcoming many of the challenges faced in managing communal resources, including community forests, can largely benefit from design principles for governing sustainable resources derived from long-enduring studies of institutions devised by Ostrom (1990). These design principles include

- Clearly defined boundaries of the resource and resource users.
- Proportional equivalence between benefits and costs.
- Collective choice arrangements, authorizing communities to participate in making and modifying the rules.
- Monitoring of resource use.
- Graduated sanctions for users who violate rules.
- Conflict resolution mechanisms.
- Minimal recognition of rights to organize, where the rights of users to devise their own institutions are not challenged by external governmental authorities, and users have long-term tenure rights to the resource.
- Nested enterprises, where appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises

In another study that dealt with "Design Principles of Robust Property Rights Institutions and What Lessons are Learned," Ostrom (2008) has shown how the first five principles fit together to form a coherent theoretical explanation of why they may work together as follows: "*When the users of a resource*

design their own rules (design principle 3) that are enforced by local users or accountable to them (design principle 4) using graduated sanctions (design principle 5) that clearly define who has rights to withdraw from a well-defined resource (design principle 1) and that effectively assign costs proportionate to benefits (design principle 2), collective action and monitoring problems tend to be solved in a reinforcing manner".

In summary, literature and practical experience increasingly draw attention to property rights and tenure security as important considerations in rural empowerment and the sustainable management of land and natural resources. Development agencies recognize property rights as critical factors determining how land and natural resources are used, managed, and how benefits from these resources are distributed. Efforts to realize community forestry development in Ethiopia therefore demand to assess how property rights issues are addressed in communities managing community forests.

2. Research Methodology

2.1. Description of the study area

The study was conducted in Gozamin district located in East Gojam Zone, and in Guba Lafto District of North Wollo Zone both situated in the Amhara region of Ethiopia (Figure 1). The study districts have a significant concentration of established community forests. As highlighted in section 1, the study aimed to investigate the performance of the community forestry program in the Amhara Region, focusing particularly on property rights, land tenure, and institutional arrangements impacting community forestry and ultimately providing insights on how the community forestry program can be revitalized in the country.

The selection of the study areas was based on data compiled by the Environment and Forest Protection Authority of the Amhara Region, responsible for managing community forestry. A list of community-managed forests was prepared to understand their geographical distribution, area coverage, proximity to urban centres, and accessibility via roads. From this list, two community forests were purposively selected: one situated in Wonka kebele (a local administrative unit) of the Gozamin District,

representing an agriculturally high-potential zone in the East Gojam Zone, and the other located in the Debot kebele of the Guba Lafto District, representing a low agricultural potential zone in North Wollo. The selection criteria took into account various factors, including topography, accessibility, establishment period, and tree species composition.

Debot Kebele, like other kebeles in the Guba Lafto district is characterized by a mountainous landscape with an average altitude of 2600 meters above sea level. The kebele is affected by severe soil erosion due to the rugged and steep slopes and soil conservation measures are being widely carried out with community involvement. Due to poor soil productivity and erratic rainfall, the community is food insecure. The community forest in Debot kebele was established between 1985 and 1989 and it covers an area of 57 ha, and the number of beneficiaries is 765 households. The major tree species planted are *Eucalyptus globules* and *Cupressus lusitanica* and the stand is complemented by natural regeneration of *Acacia* species. As the kebele is located in the low agricultural potential area the community forest was established using the Food for Work Program run by

the government (Guba Lafto District Agricultural Development Office Archive, unpublished).

The community forest in Wonka Kebele, situated in the Gozamin district covers an area of 147 ha with 965 beneficiary households. The district is found in the high potential zone, which is characterized by relatively good soil fertility, an adequate amount of rainfall and extensive areas with gentle slopes. The establishment of the community forest involved the beneficiary households contributing free labour, while the government provided free tree seedlings and technical support. Predominant tree species planted include *Eucalyptus globulus*, *Cupressus lusitanica*, and *Acacia decurrence* (Gozamin District Agricultural Development Office Archive, unpublished). The community forests in the study kebeles are located on lands that were previously partly utilized for cultivation, grazing, and on degraded sites. Crop production and livestock husbandry stand as the primary livelihood activities in both kebeles. However, a higher number of households in Debot kebele are engaged in supplementary off-farm activities such as selling fuel wood, and charcoal and participating in petty trades.

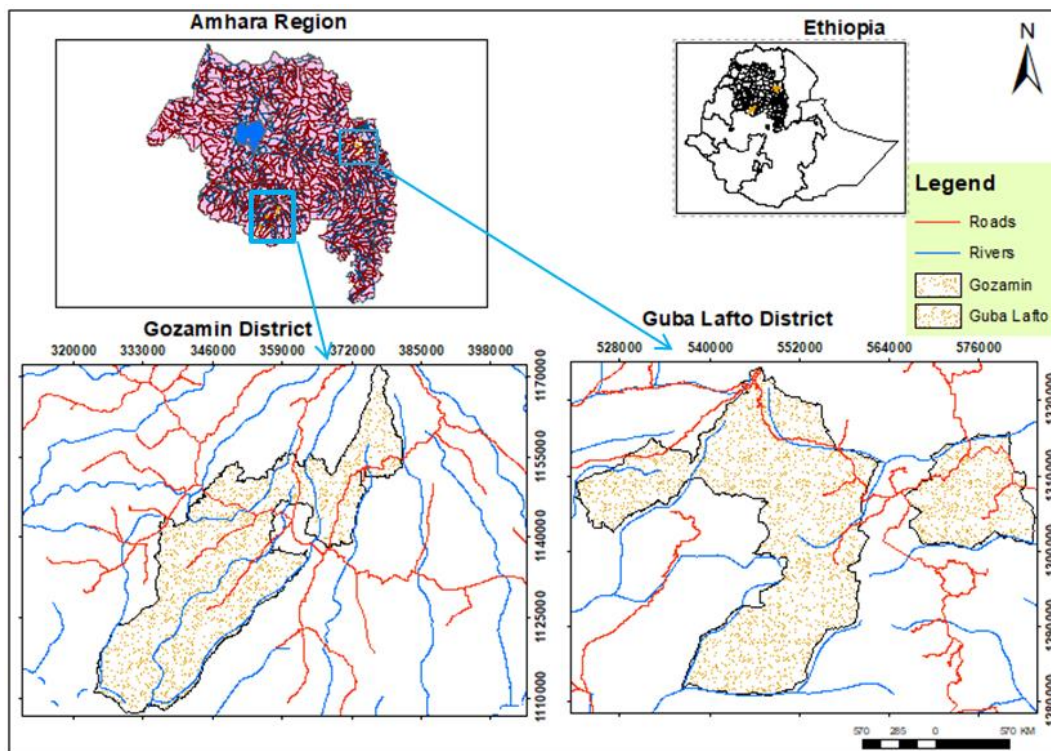


Figure 1: Location map of the study area

Source: Prepared by author using Geographic Information System

2.2. Research design

The selection of an appropriate research approach hinges on the nature of the research topic, the distinctive features of the research problem, and the specific information sources employed. In this study, which centres on investigating the perceptions, values, and attitudes of households, community groups, and government staff regarding community forestry performances and property rights issues, a cross-sectional research design was implemented to capture pertinent data and generate insightful information. According to Bryman (2012), a cross-sectional design entails gathering data across numerous cases at a single point in time to acquire quantitative or qualitative data related to multiple variables, subsequently scrutinizing them for patterns or associations.

To bolster data validity, a mixed research method encompassing both quantitative and qualitative approaches, as advocated by Oppenheim (1992), was adopted. Quantitative data primarily consisted of respondents' opinions expressed numerically as frequencies, while qualitative data encompassed views, values, ideas, arguments, and contentions that surfaced during key informant interviews, focus group discussions, and examination of legal frameworks impacting community forestry development.

The acquisition of data in this study was reinforced through triangulation, as proposed by Patton (1990). Patton argues that triangulation is a powerful solution to the problem of relying too much on any single data source or method, as it tends to affect the validity and credibility of findings. Taking note of these issues into account and considering the nature of the research a broad base of data was captured using multiple sources of evidence: survey questionnaires, semi-structured interviews (including group discussions and in-depth interviews with key informants), review of grey literature and participant observation.

Primary data was collected using a questionnaire administered to rural households engaged in community forest management. The sample included 120 households evenly distributed between Wonka kebele in Gozamin district and Debot kebele in Guba

Lafto district, comprising 25 households in Wonka kebele and 35 in Debot kebele residing near the community forest, with the remaining situated 4 to 5 km away. Sample household selection was done in consultation with extension workers and community elders in the study kebeles.

Additionally, Focus Group Discussions (FGDs) involving nine discussants per kebele and Key Informant Interviews (KIIs) with 12 participants, comprising four knowledgeable farmers and eight experts supporting community forestry interventions, were conducted. FGD and KII participants were purposively selected based on their involvement in community forestry development and proximity to or distance from the community forest. The study also applied Ostrom's (1990) design principles for governing sustainable resources, assuming that aligning efforts to revitalize community forestry with these principles would ensure property rights and motivate the community towards collective action.

In addition to primary data, secondary data were collected from relevant literature through an extensive desk review of published and unpublished reports. Furthermore, fieldwork was conducted in the community forests to gather background information on forest boundaries, assess the forest stands, examine livelihoods derived from the community forest, and evaluate the practical application of laws and the challenges faced in their implementation.

2.3. Data analysis

This research encompassed the generation of both qualitative and quantitative data, necessitating the use of a combination of data analysis methods and the triangulation of findings from different sources (Neuman, 2017). The analysis of qualitative data followed the procedures developed by Belotto (2018). Qualitative data collected from group discussions and key informants underwent immediate summarization through discussions with assistant note-takers involved in data acquisition. Thematic issues for analysis were identified based on the discussions, with a focus on prominent and recurring topics. The analysis considered the number of speakers and the category of respondents echoing similar issues. Divergent and convergent perspectives on specific matters were identified and utilized for

analysis in alignment with the research objectives. Furthermore, a comparative analysis was conducted, to compare the current community forestry management practices against Ostrom's (1990) design principles for managing communal resources. This evaluation aimed to gauge the extent to which community forest management incorporates crucial variables for enhancing property rights and effective communal resource management.

The quantitative data collected from various sources were analysed using descriptive statistics, primarily computing percentages. Additionally, the research critically scrutinized national and regional forestry legal frameworks, institutional mechanisms, and requirements that either enable or hinder community forestry development in the study region. This analysis sought to evaluate the extent of devolution of community forest control and management, along with the rights conferred upon communities, aiming to provide insights for future decision-making.

3. Results and Discussion

3.1. The genesis and evolution of community forestry in the study region

Community forestry in the Amhara region and other parts of Ethiopia originated in the early 1980s as a response to severe environmental degradation caused by drought, deforestation, and soil degradation, notably exemplified by the devastating drought of 1984. The Community Forestry Development Department of the Forestry and Wildlife Development Authority mobilized rural communities to engage in community forestry development activities and soil and water conservation practices. Findings from forestry experts and desk reviews unveiled that community forestry initiatives were initially established on socialist principles, aiming to rehabilitate the environment through tree planting and provide access to forest products for the community. The local community contributed their land and labour, while the government provided support in the form of tree seedlings, technical assistance, and guards for forest protection.

The study further discovered that the responsibility for managing community forests shifted over time. Initially, the Forestry and Wildlife Development Authority was in charge, but with the change in

regime in 1991, the management was brought under the newly organized Ministry of Agriculture and Natural resources Development. In this arrangement, the community forests were decentralized to the kebele administrations, with support from forest and environment protection task forces formed by the kebele administrations. Subsequently, the Amhara region enacted a Watershed Development Proclamation (Proclamation 204/2013) mandating the watershed community to manage community forests through the establishment of watershed associations. Currently, the management and oversight of community forests have been transferred from the Regional Office of Agriculture to the Regional Environment and Forestry Protection Authority. Although the forest and environment protection task forces were in charge of managing the community forests, they primarily functioned as support structures for kebele administrations and lacked independent legal authority to oversee forest management and decision-making regarding forest product utilization. This contravenes Ostrom's (1990) seventh design principle which emphasizes the minimal recognition of rights to organize and long-term tenure rights to the resource without being challenged by external government authorities.

The analysis uncovers the dynamics and challenges in the governance and management of community forests in the region emphasizing the necessity for involved institutions to align community forests with community interests. About 45 % of the respondents stated the primary goal of establishing and managing community forests was to protect against environmental degradation and provide low-cost poles and fuel wood, with generated income being used for local development activities. However, respondents expressed dissatisfaction with the material and financial benefits derived from community forests, indicating that community forestry in practice still emphasizes collective benefits over individual interests, reflecting socialist ideals.

Literature on community forestry stresses the need for local community involvement in decision-making and access to forest products (Maskey *et al.*, 2006; Lawler and Bullock, 2017). However, the findings reveal shortcomings in recognizing Ostrom's (1990,

2008) design principles of 'collective choice arrangements' and 'proportional equivalence between benefits and costs' for sustainable governance of common resources. Collective choice arrangements involve the participation of individuals affected by a resource regime in making and modifying rules that fit local circumstances and are considered fair by participants. Additionally, when the costs incurred by the community for community forest management generate proportional benefits, participants perceive the rules as equitable. Recognizing these principles becomes imperative for effective community forest management.

3.2. Policy and legal provisions for community forestry

For the successful development of community forestry, a supportive policy framework is crucial to enable rural communities to improve their livelihoods and forest conditions by addressing constraints hindering their efforts (Pagdee and Daugherty, 2006). Government agencies play a vital role in supporting and facilitating communities in these endeavours. Similarly, legal provisions are pivotal in ensuring forest tenure rights (Gilmour, 2016). However, previous forest laws in Ethiopia, such as the 1978 and 1984 legal frameworks, did not explicitly define the rights, responsibilities, and benefits of communities engaged in community forestry activities. The latest Federal Forest Development, Conservation, and Utilization Proclamation (Proclamation No. 1065/2018) recognizes community forestry development as a strategy to promote forestry and entitles communities involved in community forests to derive various benefits from these forests. However, supporting regulations for the proclamation are still lacking.

In the Amhara Region, the Forest Development, Protection, Utilization, and Control Directive (Directive, 002/2018) has been introduced to implement the forest development proclamation within the regional context. The directive includes positive elements related to ownership rights, management responsibilities, and benefit-sharing arrangements. However, it prohibits the division of revenue generated from community forests among individual members and mandates its use for collective social and economic development

activities. This provision contradicts Ostrom's (1990) principle of "collective choice arrangements" which allows local institutions to make and modify rules for governing a communal resource. A significant majority of respondents (87%) opposed restrictions on revenue utilization and suggested that the decision should be left to the community managing the forest. They viewed this directive as denying property rights/forest tenure rights and discouraging active participation in community forestry. Forestry experts at the regional Environment and Forest Protection Authority also expressed the opinion that the Forest Development, Conservation, and Utilization Proclamation should be accompanied by carefully drafted regulations that address the legal gaps concerning community forestry ownership rights, community forest tenure, and the interests of the local communities. Establishing clear legal frameworks, as argued by Kusters and de Graaf (2019) is crucial to safeguard community rights against potential infringements by government authorities.

Although Ethiopia has enacted a forestry development strategy (Ministry of Environment, Forest and Climate Change - MEFC, 2018), the document provides a general overview of different interventions without specifically outlining how community forestry should be designed and implemented. Experiences from other countries, however, demonstrate the importance of formulating a national strategy for community forestry that aligns with national interests. For instance, Bhutan has developed a National Strategy for Community Forestry (Social Forestry Division, 2010), which aims to empower rural communities to sustainably manage their own forests, meet their timber demands and other forest goods and services, derive economic benefits from the sale of forest products and services, and contribute to rural poverty reduction. Similarly, Nepal's Forestry Sector Strategy 2016-2025 provides a clear strategy for community forestry development (Government of Nepal Ministry of Forests and Soil Conservation, 2016). The global experience highlighted by these examples underscores the importance of designing a national strategy for community forest development in Ethiopia.

Despite the government's ambition to address environmental degradation through community

mobilization for tree planting and soil and water conservation, the forest policy appears to overlook the definition of property rights for community forests and the provision of effective forest extension support to establish forest development and management institutions. The absence of adequate community forest legislation and a clear strategy hampers the effective implementation of forestry extension programs (Agbogidi and Ofuoku, 2009). The current approach to community forest development primarily focuses on pushing the local community to contribute resources to tree planting, rather than prioritizing a comprehensive range of activities that meet both community needs and environmental protection objectives. Forestry experts in the FGDs have indicated that the authorities responsible for community forestry development have been hesitant to review existing laws and make amendments. They further emphasized that the current forest proclamation unless complemented by a regulation and directives that conform to international standards set for running effective community forestry, fails to grant adequate rights to local communities. In this regard Gilmour (2007) suggests that community forestry policy should be enabling rather than enforcing, empowering rural communities to improve their livelihoods and the condition of the forests in their vicinity by removing constraints that hinder their efforts. Likewise, Acharya (2002) argues that enhancing participatory forestry requires the development of policies, regulations, and legal frameworks that improve implementation, empower local communities, and effectively meet community needs. As the reality on the ground necessitates the development of community forestry approaches that are suitable for local circumstances, government agencies should adopt a supportive and facilitative role in assisting communities 'to benefit from community forest interventions.

The analysis of the existing policy and legal frameworks affecting community forestry suggests that a comprehensive policy and legal provisions are essential to protect the rights of communities and enable them to assert forest tenure rights. This allows communities to enhance their livelihoods through the potential income generated from community forests. Establishing clear legal frameworks is crucial for

safeguarding community rights against potential encroachment by government authorities. Additionally, the formulation of a national strategy for community forestry in Ethiopia is vital to guide the design and implementation of community forestry activities in line with national interests.

3.3. Community forest tenure security

Despite significant efforts to establish and manage community forests, substantial uncertainty persists regarding property rights over the community forests. This concern was strongly expressed during the focus group discussions and key informant interviews, with approximately 87% of the respondents sharing similar sentiments. According to respondents, sources of tenure insecurity are diverse, spanning from a lack of decision-making power in forest management and benefit sharing to the allocation of a portion of community forest land to rural landless youth. The responses from sampled households, as outlined in Table 1, underscore the erosion of tenure security, signalling an urgent need for immediate action to rejuvenate community forestry in the region.

During the focus group discussions, farmers disclosed instances where income generated from community forests is contributed to government development programs without community consent. Similar incidents, documented in Nepal's community forestry programs, highlight how decisions made without broad consultations with relevant local representatives have compromised legal rights related to forest ownership, access, harvesting, and resource management for community forest user groups (Yadav *et al.*, 2003).

The rights, incentives, and obligations of community forest developers are clearly outlined in Articles 7 and 8 of the Federal Forest Development, Conservation, and Utilization Proclamation (Proclamation No. 1065/2018). However, many of these stipulations remain unrealized due to institutional capacity constraints and the absence of regulations to facilitate the implementation of the proclamation. Insufficient legitimate and effective control over resources impedes communities' ability to manage forests effectively, as responsibility without adequate authority hinders effective forest

management by communities (Pagdee and Daugherty, 2006).

Table 1: Reasons influencing security perceptions on community forest ownership (N=120)

Reasons	Percentage of respondents
Lack of participation in decisions making on what to produce from the community forest	85
Lack of clarity on who decides the use of revenue generated	95
Prohibition of distribution of income generated to individual community members	65
Alienating part of the community forest land as a means to overcome rural youth landlessness	62
Using the money generated from community forests to cover some commitments of the Kebele Administration without the full consent of the beneficiary community	82
Leaving the community forest stands over maturing/ Not observing the harvesting/rotation period	76
Recurrent encroachment and wood theft in the community forest	54
Absence of a strong local organization in charge of managing the community forest	84
Absence of accountability for the mismanagement of the community forest	99
The community forest land belongs to the state	32
The community forest land is certified in the name of the Kebele Administration	76

3.4. Mismatch between policy change and institutional capacity to manage community forests

As discussed in Section 3.1, community forestry initiatives in the study area have been initiated by various institutions since the 1980s. However, participants in focus group discussions and key informant interviews highlighted inadequate attention given to strengthening local institutions for community forest management. There exists a lack of clarity regarding membership eligibility, duties, responsibilities, benefit-sharing arrangements, and legal accountability, conflicting with Ostrom's (1990) design principles for communal resource management. The focus has primarily remained on maintaining existing community forests. Agrawal and Ashwini (2006) stress the pivotal role of local forest management institutions in influencing outcomes of community-based forest management, alongside various socio-political, demographic, economic, and biophysical factors. Similarly, Dash *et al.* (2011) argue for the importance of participatory community-driven institutions in integrated watershed management for sustainable natural resource use. However, the current arrangement in the region, administering community forests through watershed

associations in rural kebeles, lacks clarity in defining property rights and benefit-sharing arrangements.

The study underscores a chronic issue of institutional instability, overlapping mandates, and ambiguity regarding responsibility for managing community forests between the Bureau of Agriculture, Environment and Forest Protection Authority of the Amhara Region. While the Bureau of Agriculture establishes community forests, the responsibility for management is shifted to the Environment and Forest Protection Authority. This setup complicates annual planning and transfer procedures to the Authority. Participants in the focus group discussions and key informant interviews, including forestry experts, have expressed that this institutional arrangement adversely impacts community forest productivity, environmental protection, and community forest ownership rights.

Regarding property rights, Meinzen-Dick *et al.* (2004) argue that the effectiveness of property rights claims relies on the strength of defending institutions and their ability to enforce them. Community forests in the study area exhibit institutional neglect, as observed during field visits and echoed in community and expert responses from both Agriculture Offices

and the Environment and Forest Protection Authority. Approximately 85% of respondents are unaware of who manages the community forests. Discussions and interviews highlighted the community's lack of a legitimate and effective institution to oversee community forests, and this is hindering efficient forest management. To tackle this issue, efforts should focus on establishing robust local organizations led by members fostering diverse interests of the community. This organization would advocate for rights, influence decisions, and ensure equitable benefits from community forest development interventions.

3.5. Perception on ownership, tenure, and benefits gained and motivation to participate in community forestry

Clear, transparent, and enforceable property ownership or land tenure security are essential incentives for the effective management of natural resources, including land, forests, grazing land, and water (Robinson *et al.*, 2014). The findings of this study indicate that the majority of respondents (95%) perceive community forests as belonging to the state, while a small percentage attribute ownership to the Kebele Administration. To support their perception of state ownership the respondents provided various indicators as shown in Table 2.

Table 2: Multiple indicators stated by respondents why the community perceives that community forests belong to the state authorities such as the Agricultural Office (N=120)

Indicators	Percentage
Tree seedlings are given freely by the government to establish the community forests	75
The forest guards were employed by the Agriculture Office for many years	64
The Agriculture office decides on the use of benefits from the community forests	87
The community has no authority to audit income generated and used	45
The environmental value of the community forest is given more emphasis by the Agriculture office than the income generated	80

The reasons cited by respondents for attributing community forests to state ownership are diverse. These rationales encompass historical land tenure practices, the influence of past forest laws and regulations, government agency involvement in establishing and managing community forests, and ambiguity surrounding community rights and responsibilities over the forests. The perception of state ownership may originate from the previous centralized governance approach, where decision-making and control over resources were concentrated at higher administrative levels.

It is noteworthy that the community's perception of state ownership can significantly affect their sense of ownership rights and tenure security. When communities do not perceive themselves as rightful owners of community forests, their active participation in forest management and investment in sustainable practices can be hindered. Strengthening community ownership and tenure rights can motivate active engagement in sustainable forest management, contributing to valuable resource conservation and development.

Respondents' perceptions about state ownership of community forests are influenced by factors such as limited involvement in decision-making processes regarding forest product utilization and revenue sharing. Additionally, allocating community forestland to rural landless individuals for beekeeping and livestock fattening without broad community consultation further solidifies this perception. Comparable challenges regarding property rights, tenure security, and limited benefits have been reported in previous studies on community forestry management (Arnold, 2001, 1992; Gilmour, 2016).

Findings from the study indicate that the majority of respondents (72%) believe the forestry department manages community forests, while others attribute management to the local community due to the presence of forest guards employed by the Kebele Administration and revenue utilization for local development. However, participants in focus group discussions and key informant interviews emphasized the necessity for effective technical support and the establishment of robust local institutions for efficient forest management. Concerns were raised that

community responsibilities outweighed the rights granted to them, and forestry experts shared these concerns. Pujo *et al.* (2018) emphasize the importance of community capacity building to achieve success in social forestry, highlighting the need for a comprehensive understanding of community capacity building within the social forestry system.

Active community participation in community-based forestry activities is influenced by factors such as income generated from community forests, environmental value, and proximity to forests (Tesfaye *et al.*, 2012). A significant majority of respondents (78%) expressed reluctance to participate due to a lack of visible financial returns. Landless youth and the poor have been showed disinterest due to the absence of individual income distribution. Women expressing their concerns about the current management approach indicated their willingness to contribute if community forests provided fuel wood. These findings underscore the importance of considering the interests of the entire community, including those of women (Meinzen-Dick *et al.*, 2021), to foster a sense of ownership and contribution to community forests.

Studies conducted in Burkina Faso (Coulibaly-Lingani *et al.*, 2011), Haiti (Dolisca *et al.*, 2006), and Ghana (Nkemnyi, 2016) indicate that communities actively engage in forest management programs when they receive direct benefits. Therefore, identifying and managing potential forest products accessible to community members is crucial, to enable them to explore additional livelihood activities. Clearly defining ownership and tenure rights over community forests plays a vital role in ensuring sustainable community forest management.

Comparing respondents' and focus group participants' perceptions of the value of community forests in high agricultural potential areas (Gozamin District, East Gojam) and low agricultural potential areas (Guba Lafto District, North Wollo) reveals contrasting perspectives. Community forests in low-potential areas are valued for environmental conservation, biomass for livestock feed, and growing indigenous trees and shrubs for environmental rehabilitation and supply of fuel wood. Conversely, in high-potential

zones, the emphasis is on the commercial value of community forests, driven by high rainfall and suitable conditions for fast-growing tree species such as eucalypts, grevillea, cupressus and acacia.

Focus group discussions with farmers living close and far from community forests portrayed mixed feelings about the forests' value to their livelihoods. Households living close to the community forests acknowledged that they have gained some benefits such as fodder, thatching grass and fuel for cooking from dead branches twigs and leaves in the form of litter at a nominal price. However, they bitterly expressed that they have lost a lot of grazing land due to the community forest establishment. They also described the difficulties they face to keep their livestock out of the community forest and the penalties they incur when their livestock enter the community forests. The damages inflicted on crops by wild animals inhabiting the community forest were also stated as a serious challenge.

On the other hand, respondents living far from the community forest expressed that they lack any immediate benefit and that their participation in the community forest development is to evade penalties set by the local administration. It was however noted by both groups that the income generated from the sale of community forests was used to cover expenses for maintaining communal infrastructure such as schools and water points. They also underscored the establishment of the community forest has inspired them to plant trees and shrubs around their home gardens and along farm boundaries. Furthermore both groups have recognized the environmental conservation value of the community forests in areas prone to flooding and soil erosion. These assertions align with the argument that factors such as place attachment, nature connectedness, and social norms play significant roles in community participation in forestry and forest conservation (Isyaku, 2021); and similar trends were reported in communities involved in a participatory forest management elsewhere in Ethiopia (Amha *et al.*, 2014).

Considering the insignificant household-level benefits, the community's lack of confidence in ownership sentiments, and assuming the

government's willingness to heed community suggestions, respondents were asked their opinions on immediate community forest management measures (Table 3). The responses varied widely, all stemming from a lack of confidence in ownership sentiments.

Although the state claims that community forests are collective property belonging to local rural communities, the perspectives of the respondents highlight that community forests are perceived as property of the state and the community lacks clearly

defined property rights. When this sentiment prevails and property rights remain undefined, coupled with varying asset endowments among local communities, sustaining a community forestry program becomes a daunting task for the government. Hence, it is imperative to address and formalize property and tenure rights within community forests from the outset. Moreover, establishing a monitoring mechanism that enables local communities to track forest management progress toward sustainability is of utmost importance.

Table 3: Multiple responses on immediate actions to be taken on the management of community forests (N=120)

Suggested options for future management community forests	Percentage
The government should claim complete control	25
Transfer it to the landless rural youth	65
Lease it to the private sector	30
Divide it in to individual households	84
The current status quo should be maintained	12

3.6. Technical and management issues in community forests

The document review unveiled that many of the community forests were established over 35 years ago, and field observations revealed their over-mature state with irregular and poor stand growth. Specifically, the mismanagement of coppice in eucalyptus stands was evident due to insufficient thinning practices, resulting in suboptimal pole growth. Moreover, most community forests lacked a comprehensive forest management plan, leading to reduced productivity. Occasional replanting after harvest and protective measures against grazing and theft were sporadically implemented but lacked consistent application.

In focus group discussions, participants emphasized these significant issues, attributing them to unclear ownership rights, and considering community forests as collective property without clear accountability mechanisms. Additionally, the absence of forestry extension support was identified as a contributing factor. Forestry experts echoed concerns about the limited extension support, casting doubts on the potential of community-based forestry to enhance rural livelihoods and environmental conservation. These responses corroborate Agbogidi and Ofuoku's

(2009) findings, underlining the importance of a community forestry extension policy in addressing legal issues, motivating local communities, securing land use rights, and ensuring equitable benefit sharing.

Approximately 73% of the respondents rated the productivity of the community forests as weak. This assessment was based on various indicators detailed in Table 4, which were also observed during field visits.

The challenges identified in forest productivity underscore the imperative for enhanced forest management practices and improved forestry extension support. Resolving these issues necessitates establishing clear ownership rights, robust accountability mechanisms, and the development of comprehensive forest management plans. Strengthening the institutional framework and providing adequate technical support can elevate community forests' productivity and foster sustainable development within rural communities.

Discussions with focus group participants and key informants underscored the detrimental impact of the absence of a participatory forest management plan on forest productivity. Despite the potential for 5 to 6

harvests in eucalyptus woodlots, most stands had only undergone two to three harvests, leading to substantial economic losses. This observation aligns with Yadav *et al.* (2003), who emphasized that passive forest management leads to the underutilization of community forests and constrains their capacity to provide a broader range of forest products. Overall, the community forest development situation indicated inadequate management practices, weak protection measures, and instances of encroachment.

Participants in the focus group discussions recommended immediate action by the government to address obstacles related to ownership and forest tenure rights to fulfil the objectives of establishing community forests. Considering the challenges faced

in many community forestry programs, Arnold (2001) suggests that countries involved in community forestry should prioritize the consolidation of already established community forests and shift their focus from mere promotion to critical analysis that addresses the identified problems and weaknesses. Moreover, designing a monitoring tool enabling local communities to track forest management progress towards sustainability, as proposed by Pokharel *et al.* (2015), is deemed crucial. The findings stress the urgent need for improved management practices, supported by effective extension services, participatory planning, and reinforced protection measures in community forests. Addressing these issues from the perspective of community forest property rights will enhance productivity and sustainability in community forestry initiatives.

Table 4: Multiple responses on indicators of poor productivity of the community forests (N=120)

Indicators of poor productivity of community forests	Percentage
The community forest shows irregular growth of trees	82
There is encroachment into the community forest due to grazing and theft	65
The community forest lacks a management plan	57
The community forest is most of the time left to over-mature (i.e. harvesting period is not observed)	95
There is no thinning of coppices of eucalypts	32
There is a lot of empty space in the community forest	89

3.7. Community forestland certification and its implication for property rights

The study noted that community forestland certification is part of the systematic rural land certification process implemented in the Amhara region (Proclamation No. 252/2017). According to the Rural Land Administration and Use System implementation regulation of the Amhara National Regional State (Regulation No. 159/2018), the land certification process involves the participation of various stakeholders, including the community, individual farmers, government institutions, and non-state actors like church leaders and school directors. However, discussions with district and kebele-level land administration experts revealed several problems encountered during the certification process for community forestland. These challenges include the absence of representatives from Agriculture Offices and the Environment and Forest Protection Authority

(now managing community forests) during demarcation and adjudication of the community forest land, conflicting land claims between the local community and government forestry enterprises, the lack of a legally recognized community level organization responsible for managing the community forest and difficulties in demarcating the actual boundaries due to encroachments by farmers. These problems underscore the neglect of property rights in community forests and institutional arrangements for their management.

The absence of a legally recognized local-level institution managing the community forests has forced the rural land administration office to register and certify the community forest land either in the name of the Natural Resources Development and Management Committee established by the Rural Kebele Administrations or in the name of the Kebele

Administration. While the community forestland certificate and map are kept in the Kebele Administration, a vast majority of respondents (94%) are unaware of this certification. Some focus group discussion participants acknowledged the community forest land certification by the Land Bureau but expressed uncertainty about how this arrangement establishes property rights sentiments when the community is not allowed to form its own institution and governance structure that is accountable to the community.

Whether the land is certified in the name of the kebele or specific groups and committees managing development activities, the crucial concern lies in the subsequent steps to effectively manage community forests. However, actions in this regard are nearly absent. Unless prompt measures complement community forestland certification with explicit forest tenure rights and a local unit to facilitate community forest management, aligned with the Federal Forest Development, Conservation, and Utilization proclamation (Proclamation No. 1065/2018), the eroding ownership sentiment within the community will adversely impact community forest management.

Forest certification in the local community's name can encourage socially and environmentally responsible forest management while benefiting communities economically (Charnley *et al.*, 2022). Hence, the apparent property rights challenges in managing community forests need careful attention from the regional Environment and Forest Protection Authority, now tasked with managing these forests. The Authority should lead in organizing the local community into a recognized group to handle community forest management responsibly and accountably. This effort should involve consultation with relevant government authorities mandated to organize farmers' groups to establish a legally recognized entity.

3.8. Options to revitalize future management of community forestry

The Federal Forest Development, Conservation, and Utilization proclamation (Proclamation No. 1065/2018) define community forests as forests developed, conserved, utilized, and administered by

the community on its private or communal possession, based on by-laws and plans developed internally. The reviews, results, and discussions in the preceding sections have indicated that community forestry in the Amhara Region of Ethiopia faces numerous challenges related to property/tenure rights and institutional arrangements for the overall management, displaying discouraging progress. This scenario is not unique to Ethiopia, as research reports have depicted both successful and unsuccessful cases of communal woodland resource management in various contexts (Arnold, 1992, 2001; Gilmour, 2016).

Acknowledging the significance of community forestry development in Ethiopia within the framework of the federal forest proclamation and considering its operational history in the country, the government is eager to sustain community forestry initiatives. The suggestions provided by respondents on revitalizing community forestry were documented, and their responses are summarized in Table 5. The prevailing trend in the responses indicates that for community forests to thrive, farmers aspire to be granted clear ownership rights and responsibilities, establish their own organizational structures to manage the forest, and ensure fair benefit sharing while recognizing the significant role of the government in facilitating community forestry interventions.

The respondents highlighted that promoting community forestry activities in their locality could benefit from favourable conditions present in the villages, such as strong social cohesion, good experience in village leadership, and the availability of communal land suitable for community forestry.

The viewpoints expressed by the respondents and the field observations unmistakably indicate that revitalizing community forestry in Ethiopia heavily depends on the active participation of the community. This involvement is influenced by a meticulous understanding of property rights, tenure security issues, and the instruments impacting the implementation of community forestry programs.

4. Conclusion

This study aims to evaluate the community forestry program in the Amhara region of Ethiopia,

specifically focusing on property rights and associated institutional arrangements and ultimately indicate strategies to revitalize community forestry in the region. The assessment of community forestry practices in this area was conducted through the lens of property rights and tenure security, emphasizing Ostrom's (1990) design principles for governing common resources.

The necessity for community forestry development, protection, and management arises from the urgent need to counter the adverse impacts of severe deforestation, land degradation, and a depletion of forest resources. Addressing these challenges demands active community involvement in forestry development endeavours. However, despite the region's long history of community forestry practices; there is uncertainty in confidently asserting that both the concept and practical implementation of community forestry align with comprehensive standards comprising technical, social, economic, and political aspects.

The success of community forestry hinges on an enabling policy environment. This encompasses a supportive policy framework and a national strategy for community forestry development, complemented by the registration and certification of community forestland in the name of a legally recognized entity representing the community. These measures would offer guidance for community forestry extension support, promote the formation of local institutions for effective forest management, and encourage communal efforts. However, the current promotion of community forestry lacks clear property rights over community forests and a comprehensive vision outlining the economic potential of community forest interventions, as well as the necessary organizational and supportive structures for communal initiatives.

Moreover, challenges such as institutional instability, overlapping mandates, and ambiguity regarding responsibility for managing community forests, alongside ineffective local institutional setups, contribute to the underperformance in community forestry activities. These incidents collectively suggest that the promotion of community forestry in the region has been guided more by the traditional belief in the significance of trees for rural livelihoods

and ecosystem restoration, rather than being steered by well-defined policies and a national strategy for community forestry

Overall, this study reveals institutional gaps in the community forestry program that weaken property rights, resulting in tenure insecurity and a lack of individual household benefit packages. These issues hinder local communities' motivation to actively engage in community forestry programs. The absence of legitimate and effective control over resources limits the communities' ability to efficiently manage forests. Hence, government agencies, acknowledging the importance of property rights, should play a supportive and facilitative role in assisting communities to promote community forestry activities suitable for diverse ecological settings.

The empirical findings on ownership sentiment, local-level institutions, clarity regarding the objectives of establishing community forests, and community participation in decision-making and benefit-sharing arrangements should serve as the basis for revitalizing existing community forests and implementing efficient community forestry programs in the future. To achieve this, the government should take prompt actions to develop a comprehensive community forest development policy and strategy, focusing on ensuring property rights, tenure security, community decision-making, the establishment and empowerment of local institutions, and equitable benefit-sharing. In addition, strengthening community forestry institutions is crucial, as the claims on effective property rights largely rely on the existence of robust local institutions that safeguard the rights and enforce the obligations of the beneficiary community.

Acknowledgements

I would like to acknowledge forestry experts in Gozamin and Guba Lafto districts Agricultural Development Offices for their unreserved support during data collection and the farmers in the study kebeles for providing their genuine thoughts and concerns.

Funding statement

This research did not receive any financial and material support from any organization.

Data availability statement

Data will be made available upon request.

Conflict of interest

The authors declared that there is no conflict of interest.

References

- Acharya, K.P. (2002). Twenty years of community forestry in Nepal. *International Forestry Review*. 42(2):149-156 DOI: [10.1505/IFOR.4.2.149.17447](https://doi.org/10.1505/IFOR.4.2.149.17447)
- Adhikari, S., Kingi, T., and Ganesh, S. (2015). Incentives and Community Participation in the Governance of Community Forests in Nepal. *Small-scale Forestry*. 15(2):1-19. DOI: [10.1007/s11842-015-9316-8](https://doi.org/10.1007/s11842-015-9316-8)
- Agrawal, B. (2001). Participatory exclusion, community forestry and gender: An analysis for South Asia and a conceptual framework. *World Development* 29:1623-1648. DOI: 10.1016/s0305-750x(01)00066-3
- Agbogidi, O.M., and Ofuoku, A.U. (2009). Forestry extension: Implications for forest Protection. *International Journal of Biodiversity and Conservation* 1(5): 098-104: <http://www.academicjournals.org/ijbc>
- Aggarwal, S., Larson, A.M., McDermott, C., Katila, P., and Giessen, L. (2021). Tenure reform for better forestry: An unfinished policy agenda. *Forest Policy and Economics* 123: <https://doi.org/10.1016/j.forpol.2020.102376>
- Agrawal, A., and Ashwini, C. (2006). Explaining success on the commons: Community forest governance in the Indian Himalaya. *World Development* 34(1): 149-166, DOI: 10.1016/j.worlddev.2005.07.013
- Ameha A, Larsen, H.O., and Lemenih, M. (2014). Participatory forest management in Ethiopia: learning from pilot projects. *Environmental Management* 53:838–854. DOI <https://doi.org/10.1007/s00267-014-0243-9>
- Arnold, J.E.M. (1992). Community Forestry, Ten Years in Review. FAO, Rome. <https://www.fao.org/3/u5610e/u5610e00.htm>
- Arnold, J.E.M. (2001). Forests and people: 25 years of community forestry. FAO, Rome. <https://www.fao.org/docrep/012/y2661e/y2661e00.htm>
- Baland, J.M., and Plateau, J.P. (1996). Halting Degradation of Natural resources: Is there a role for Rural Communities? Calrendon Press, Oxford. <https://doi.org/10.1016/j.forpol.2014.11.004>
- Belotto, M. (2018). Data Analysis Methods for Qualitative Research: Managing the Challenges of Coding, Inter-rater Reliability, and Thematic Analysis. DOI: 10.46743/2160.3715/2018.3492, Biomedical Research Alliance of New York.
- Bryman, A. (2012). Social research methods. 4th Edition, Oxford University press, Oxford.
- Charnley, S., Humphries, S., Engbring et al., (2022). Supporting Community Forestry Certification in Tropical Countries by Increasing Actor Engagement across Scales. *Small-scale Forestry* 21: 553–579. <https://doi.org/10.1007/s11842-022-09518-8>
- Coulibaly-Lingani, P. Savagodo, P. and Tigabu, M. (2011). Factors influencing people's participation in the forest management program in Burkina Faso, West Africa. *Forest Policy and Economics*. 13(4):292-302: DOI: 10.1016/j.forpol.2011.02.005
- Cronkleton, P. and Larson, A. (2015). Formalization and Collective Appropriation of Space on Forest Frontiers: Comparing Communal and Individual Property Systems in the Peruvian and Ecuadorian Amazon, Society and Natural Resources. *International Journal*, 28 (5): 496- 512: DOI: 10.1080/08941920.2015.1014609
- Dahal G.R., Pokharel, B.K., Khanal, D.R, and Pokhrel, P.R. (2017). Why Does Tenure Security Matter in Community Forestry? A Critical Reflection from Nepal. *Journal of Forest and Livelihood* 15(1): DOI: <https://doi.org/10.3126/jfl.v15i1.23082>
- Dash, K.P., Tapaswini-Dash, P.T., and Kara, P.K. (2011). The role of local institutions in sustainable watershed management: lessons from India. *Development in Practice* 21(2): 255-268: DOI: 10.1080/09614524.2011.543271
- Dale, P.F., and McLaughlin, J.D. (2000). Formalizing Property Rights. In: Dale P.F., and McLaughlin, J.D. (eds.) Land Administration 26-35. <https://doi.org/10.1093/oso/9780198233909.003.007>
- Directive 002/2018 (2008). Forest Development, Protection, Utilization, and Control Directive,

- Environment and Forest protection Authority. Amhara Region, Ethiopia.
- Dolisca, F., Carter, D.R., McDaniel, J.M., Shannon, D.A., and Jolly, C.M. (2006). Factors influencing farmer's participation in forestry management programs. A case study from Haiti. *Forest Ecology and Management* 236, 324–331. <https://doi.org/10.1016/j.foreco.2006.09.017>
- Doss C., and Meinzen-Dick, R. (2020). Land tenure security for women: a conceptual framework. *Land Use Policy* 99: <https://doi.org/10.1016/j.landusepol.2020.105080>
- EPA, (1997). Environmental policy. The Federal Democratic of Republic of Ethiopia, Addis Ababa.
- FAO (2002). Land Tenure and Rural Development. Land Tenure Series 3. Food and Agriculture Organization of the United Nations, Rome: <https://www.fao.org/3/y4307e/y4307e00.htm>
- FAO. (2007). State of the World's Forests 2007. Food and Agriculture Organization of the United Nations, Rome.
- FAO. (2011). Reforming forest tenure: issues, principles and process. Food and Agriculture Organization of the United Nations Forestry Paper No. 165. Rome: <https://www.fao.org/3/i2185e/i2185e00.pdf>
- FAO. (2014). State of the world's forests: enhancing the socioeconomic benefits from the forests. Food and Agriculture Organization of the United Nations, Rome: <https://www.fao.org/3/i3710e/i3710e.pdf>
- Forum for Environment. (2011). Forest types in Ethiopia: status, potential contribution, and challenges in Ethiopia. Addis Ababa.
- Gilmour, D. (2007). Regulatory frameworks for community forestry with particular reference to Asia: Proceedings: International Conference on Poverty Reduction and Forests, Bangkok: http://www.recoftc.org/site/fileadmin/docs/Events/RRI_Conference/Proceedings/Paper_7_Gilmour.pdf
- Gilmour, D. (2016). Forty years of community-based forestry. FAO forestry paper 176, Rome: <http://www.fao.org/3/a-i5415e.pdf>
- Government of Nepal Ministry of Forests and Soil Conservation. (2016). Forestry Sector Strategy. 2016-2025. Babmalhal, Kathmanadu: <https://faolex.fao.org/docs/pdf/nep205231.pdf>
- Hizkia, R. (2016). Property Rights and Deforestation: Implementing Community Forestry in Indonesia: Tale of Two Villages. Policy Paper, No. 4, Center for Indonesian Policy Studies (CIPS), Jakarta: <https://www.econstor.eu/bitstream/10419/249384/1/CIPS-PP04.pdf>
- Hobley, M. (1996). Participatory forestry: the process of change in India and Nepal. Rural development forestry study guide 3. Overseas Development Institute London: <https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8144.pdf>
- Iyaku, U. (2021). What motivates communities to participate in forest conservation? A study of REDD+ pilot sites in Cross River, Nigeria. *Forest Policy and Economics* 133(C): <https://doi.org/10.1016/j.forpol.2021.102598>
- Kusters, K., and de Graaf, M. (2019). Formalizing Community Rights to Forests: Expectations, Outcomes and Condition for Success. Tropenbos International. Tropenbos International, Wageningen, the Netherlands. <https://www.researchgate.net/publication/334372323>
- Kusters, A., de Graaf, M., Ascarrunz, N., Benneker, C. and Zagt, T.R. (2022). Formalizing community forest tenure rights: A theory of change and conditions for success. *Forest Policy and Economics* 141. <https://doi.org/10.1016/j.forpol.2022.102766>
- Kelley, P., and Graglia, M. (2017). Why Property Rights Matter? <https://www.newamerica.org/future-land-housing/blog/why-property-rights-matter/>
- Larson, M., Monterroso I., Liswanti, N., and Tamara, A. (2023). What is forest tenure (in)security? Insights from participatory perspective analysis. *Forest Policy and Economics* 147:102880 <https://doi.org/10.1016/j.forpol.2022.102880>
- Larson, A.M., and Dahal, G.R. (2012). Introduction: Forest tenure reform: new resource rights for forest-based communities. *Conservation and Society* 10(2): 77-90. <https://www.jstor.org/stable/26393066>
- Larson, A.M. D. Barry, D. and Dahal, G.R. (2010). New rights for forest-based communities? Understanding processes of forest tenure reform,

- International Forestry Review 12 (1): 78-96: DOI:10.1505/ifor.12.1.78
- Li, S.Y., and Marafa, L.M. (2022). Institutions and power relations and the implementation of community forestry: a case study of Taiwan, *An International Journal of Forest Research* 95 (4): 518–530. <https://doi.org/10.1093/forestry/cpac005>
- Lawler, J.H., and Bullock, R.C.L. (2017). A case for indigenous community forestry. *Journal of Forestry* 115(2): <http://dx.doi.org/10.5849/jof.16-038>
- Maskey, V., Gebremedhin, T.G., and Dalton, T.J. (2006). Social and cultural determinants of collective management of community forest in Nepal. *Journal of Forest Economics* 11 (4): 261–274. DOI:10.1016/j.jfe.2005.10.004
- Meinzen-Dick, R., Pradhan, R., and Gregorio, M.D. (2004). Understanding Property Rights. In Meinzen-Dick, R. and Gregorio, M.D.(eds.) *Collective Action and Property Rights for Sustainable Development*, Focus 2020. Brief 3, Washington DC: IFPRI.
- Meinzen-Dick, R.S., Doss, C.R., Flintan, F., Knight, R., Larson, A.M. and Monterroso, I. (2021). Women's Tenure Security on Collective Lands: A Conceptual Framework. IFPRI Discussion Paper 2074, International Food Policy Research Institute (IFPRI), Washington, DC. DOI: <https://doi.org/10.2499/p15738coll2.134876>
- Mengistu, K. (2002). Country paper: Ethiopia Tropical Secondary Forest Management. Workshop on Tropical Secondary Forest Management in Africa: Reality and perspectives. In collaboration with ICRAF and CIFOR Nairobi, Kenya. 9-13 December 2002, Nairobi, Kenya. <https://www.fao.org/3/j0628e/J0628E50.htm>
- Mwangi, E., and Meinzen-Dick, R.S. (2009). Understanding Property Rights in Land and Natural Resource Management: <http://ebrary.ifpri.org/utills/getfile/collection/p15738coll2/id/129490/filename/129701.pdf>
- Ministry of Environment, Forest and Climate Change (MEFCC) (2018). National Forest Sector Development Program, Ethiopia. Ministry of Environment, Forest and Climate Change, Ethiopia. <https://www.undp.org/ethiopia/publications/ten-year-national-forest-sector-development-programme>.
- NCS. (1997). National Conservation Strategy: Volume II: National Policy on Natural Resources and the Environment. Ministry of Natural Resource, Development and Environmental Protection, Addis Ababa.
- Neuman, W.L. (2017). *Social Research Methods: Qualitative and Quantitative Approaches*. 7th edition. Pearson Education Ltd., London.
- Nkemnyi, M.F. (2016). An Analysis of Local Participation in Community Forestry: The Case of Tinto and Bimbia-Bonadikombo Community Forest, Cameroon. *Sustainability in Environment* 1(2):85-97: DOI:10.22158/se.v1n2p85
- Ojanen, M., W., Zhou, D.C., Miller, S.H., Nieto, B., and Petrokofsky, G. (2017). What are the environmental impacts of property rights regimes in forests, fisheries and rangelands? *Environmental Evidence* 6: 12: <https://doi.org/10.1186/s13750-017-0090-2>
- Oppenheim, A.N. (1992). *Questionnaire Design, Interviewing and Attitude measurement*. New edition, Continuum, London and New York.
- Ostrom, E. (1990). *Governing the commons. The evolution of institutions for collective actions*. Cambridge University Press, Cambridge.
- Ostrom, E. (2008). Design Principles of Robust Property Rights Institutions: What Have We Learned? In: Gregory K. Ingram, G.K. and Yu-Hung Hong, Y.H. (eds.). *Proceedings of the 2008 Land Policy Conference, Property Rights and Land Policies*. Lincoln Institute of Land Policy, Cambridge, Massachusetts, pp. 25-51.
- Pagdee, A., Kim, Y. and Daugherty, P.J. (2006). What Makes Community Forest Management Successful: A Meta-Study from Community Forests throughout the World. *Society and Natural Resources* 19: 33-53. DOI: 10.1080/08941920500323260
- Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods*. Second Edition, Sage publications, New Delhi.
- Peluso, N.L., Kelly, A.B., and Woods, K. (2013). Context in land matters: The effects of history on land formalizations.. Center for International Forestry Research (CIFOR), Bogor, Indonesia. <https://www1.cifor.org/fileadmin/subsites/proformal/PDF/RPeluso1210.pdf>

- Pimentel, D. M., McNair, M., Buck, M., and Kamil, J. (1997). The value of forests to world food security. *Human Ecology* 25: 91-120. <https://www.jstor.org/stable/4603227>
- Pokharel, R.K., Neupane, P.R., Tiwari, K.R. and Köhl, M. (2015). Assessing the sustainability in community based forestry: A case from Nepal. *Forest policy and Economics* 58:75-84: DOI:10.1016/j.forpol.2014.11.006
- Proclamation No. 1065/2018 (2018). Forest Development, Conservation, and Utilization Proclamation. Negarit Gazeta No. 21. Addis Ababa, Ethiopia.
- Proclamation No. 204/2013 (2013). The Community Participation in Developed or to be Developed Watersheds Administration and Use System. The Amhara National Regional State, Bahir Dar, Ethiopia
- Proclamation No.252/2017(2017). The Revised Rural Land Administration and Use Determination, Proclamation. Amhara National Regional State, Bahir Dar, Ethiopia.
- Pujo, P., Sofhani, T.F., Gunawan, B., and Syamsudin, T.S. (2018). Community Capacity Building in Social Forestry Development: A Review. *Journal of Regional and City Planning*. 29 (2): 113: DOI:10.5614/jrcp.2018.29.2.3
- Regulation No. 159/2018 (2018). Regulation for the Revised Rural Land Administration and Use System Implementation of the Amhara National Regional State. Amhara region, Bahir Dar, Ethiopia.
- Robinson, B.E., Holland, M.B., and Naughton, L. (2014). Does secure land tenure save forests? A meta-analysis of the relationship between land tenure and tropical deforestation. *Global Environmental Change* 29: 281- 293. <https://doi.org/10.1016/j.gloenvcha.2013.05.012>
- Schreckenberg, K., and Luttrell, C. (2009). Participatory Forest Management: A Route to Poverty Reduction? *The International Forestry Review* 11: 221-238: <https://doi.org/10.1505/ifor.11.2.221>
- Shrestha, K., and McManus, P. (2008). The politics of community participation in natural resource management: Lessons from community forestry in Nepal. *Australian Forestry* 71: 2. DOI:10.1080/00049158.2008.10676280
- Social Forestry Division. (2010). National strategy for Community Forestry: The way forward. Ministry of Agriculture and Forests, Department of Forests and Park Services, Royal Government of Buhtan <https://faolex.fao.org/docs/pdf/bhu167090.pdf>
- Sunderlin, W., Hatcher, J., and Liddle, M. (2008). From exclusion to ownership: challenges and opportunities in advancing forest tenure reform. Washington, DC, RRI. <https://rightsandresources.org/wp-content/exported-pdf/fromexclusionfinal.pdf>
- Tesfaye, Y, Anders, R, and Folke, B. (2012). Attitudes of local people towards collective action for forest management: the case of PFM in Dodola area in the Bale Mountains, Southern Ethiopia. *Biodiversity and Conservation* 21:245–265. DOI:10.1007/s10531-011-0181-2
- Toulmin, C. (2009). Securing Land and Property Rights in Sub-Saharan Africa: The Role of Local Institutions. *Land Use Policy* 26(1): 10-19. DOI:10.1016/j.landusepol.2008.07.006
- UDAID. (2006). The role of property rights in natural resources management, good governance and empowerment of the rural poor. https://www.land-links.org/wp-content/uploads/2016/09/USAID_Land_Tenure_Property_Rights_and_NRM_Report.pdf
- Valkonen, A. (2021). Examining sources of land tenure (in)security. A focus on authority relations, state politics, social dynamics and belonging. *Land Use Policy* 101. <https://doi.org/10.1016/j.landusepol.2020.105191>
- Yadav, N.P, Dev, O.P., Sprigate-Banginski, O., and Soussan, J. (2003). Forest Management and Utilization Under Community Forestry. *Journal of Forest and Livelihoods*.3(1):37-50.