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The Way Forward for Community Forestry in Nepal: Analysis of Performance against National Forestry Goals

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Abstract: Covering 45% of Nepal's national territory, forests play a key role in maintaining the daily life of most rural communities. Community forestry is a participatory forest management approach for managing state-owned forests by local communities. By assessing the link between national level forestry goals and the community forestry outcomes, this study aims to measure the performance of community forestry towards achieving sustainable forest management goals. The 3L causative benchmark model was used, with some adaptations to fit the national context of Nepal. Data were collected through semi-structured interviews, a questionnaire survey, as well as using secondary sources such as policy documents, governmental and non-governmental reports, and scientific papers. Results reveal that community forestry is oriented towards achieving sustainable forest management goals, but there are aspects where further improvement is needed: forest product diversification, marketing and business, and planning and management of the non-marketable forest ecosystem services. Community forestry's role in managing the conflicting interests between stakeholders and promotion of the forestry sector in society is judged to be beneficial. There is an envisaged positive pathway to enhance the performance of community forestry through strong forest tenure rights, community friendly policies and regulations, and proper technical and business support from forest authorities.

Keywords: participatory forestry; causative evaluation; forest policy; management institution



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1. Introduction

In general, community-based forestry includes initiatives, sciences, policies, institutions, and processes that are intended to increase the role of local people in governing and managing forest resources [1]. Community forestry (CF) is one form of community-based forestry, which has become a popular participatory forest management approach in Nepal, backed by decentralised and participatory reforms [2]. In CF, forest resources are conserved, managed, and utilised by local people as an organised group [3]. Gilmour and Fisher [4] defined CF as the control, protection, and management of forest resources by rural communities for whom trees and forests are an integral part of their farming systems.

The efficiency and effectiveness of CF have been areas of interest for researchers around the world; this forest management system has already seen long periods of implementation [4,5]. There are studies confirming that CF holds promise as a viable approach to forest conservation and community development [6–8]. However, major gaps remain between CF in theory and practice: in some places, devolution of forest management authority from state to communities has only been partial and disappointing [6,9], while local control over forest management appears to have more ecological than socioeconomic benefits [10], with instituting scientific forestry not necessarily ushering in benefits for the community [11]. Baynes et al. [12] identified government support and material benefits for community members (timber or non-timber forest products, employment, or payment for timber rights) as

being key success factors for CF. Issues regarding these factors have already been indicated for Nepal CF [8]. Nepal is one of the countries where CF has emerged as one of the major pillars for forest management strategy over the past three decades. Despite achievements in reducing deforestation and providing basic forest products to local users, there is a common concern regarding how CF in Nepal can reach its optimal potential in the future [13], by evolving from only satisfying some basic needs of the communities to having a significant and continuously increasing contribution to local communities' wellbeing.

In this context, this study aims to assess the performance of CF acting as an entity managing state-owned forests in the context of Nepal national forest policy and in the frame of sustainable forest management. Using the 3L causative model described by Stevanov and Krott [14], this study focuses at determining to what extent CF as a state forest management institution meets the national forestry goals of Nepal, and identifies the key issues than can improve CF performance.

2. Materials and Methods

2.1. Forestry Sector Governance in Nepal

Forests and other wooded lands cover 44.7% of the total area of Nepal, with 5.96 million ha of forests and 0.65 million ha of other wooded lands [15]. Nepal has handed state-owned forests to local communities under CF to conserve, manage, and utilize forest resources based on approved forest management plans (FMPs). There are more than 22,000 Community Forest User Groups (CFUGs), which are associated with more than 2.9 million households (about 50 percent of the total rural population), managing 37.5% of the total forest area (2.3 million ha excluding other wooded land) of Nepal [16]. Over the last three decades, CF has emerged as a successful community approach for mobilising the local people in forest resource management, transferring the forest management rights from the central to the local level, improving the forest conditions, and uplifting the livelihood of forest-dependent communities. Transferring the forest management rights from the central to the local level, CF has very much been successful in mobilising the local people in forest resource management [17], increasing availability of forest products, promoting biodiversity conservation, strengthening local democracy, and mediating local conflicts [18,19]. CF in Nepal has been successful in developing human, social, and natural capitals at the local as well as at the national levels [20,21].

The new constitution of Nepal has provisioned the right of national forest management to provincial government. At present, there is one federal Ministry for Forest and Environment, with limited staff, rights, and resources. State-owned forest management mandates, as well as resources and staff, have been transferred to the provincial level. The federal ministry is responsible for formulating national forest policies and regulations for the whole country's forest resources. Provincial governments formulate adapted policies based on the national policies formulated by federal government. Although they are not operationally subordinated to the national level of government, still, the provincial level of government is subordinate to the national level in terms of policy formulation and implementation (as suggested by the dotted lines in Figure 1).

There are seven provincial ministries responsible for forests and environment at every province, aimed at leading the management of national forests along with regulation of private forestry [21]. There are 7 provincial forest directorates (FD) and 84 Division Forest Offices (DFOs) subordinate to provincial ministries (Figure 1). Policy and legal reforms in forests recognize and define the role of the federal, provincial, and local government in managing forest resources. After the initiation of the CF concept in the 1970s, the concerned government institutions as well as officers shifted their role of managing, policing, and controlling to extension, mediation, and facilitating, while the main forest management attributes have been transferred, over time, to CFUGs. CFUGs are formed democratically and are legally registered at Division Forest Offices (DFOs; previously known as District Forest Offices) under the CFUG Constitution, which defines the rights and roles of forest

users. They also prepare FMPs/operational plans with support from forest technicians, which are also approved by DFOs.

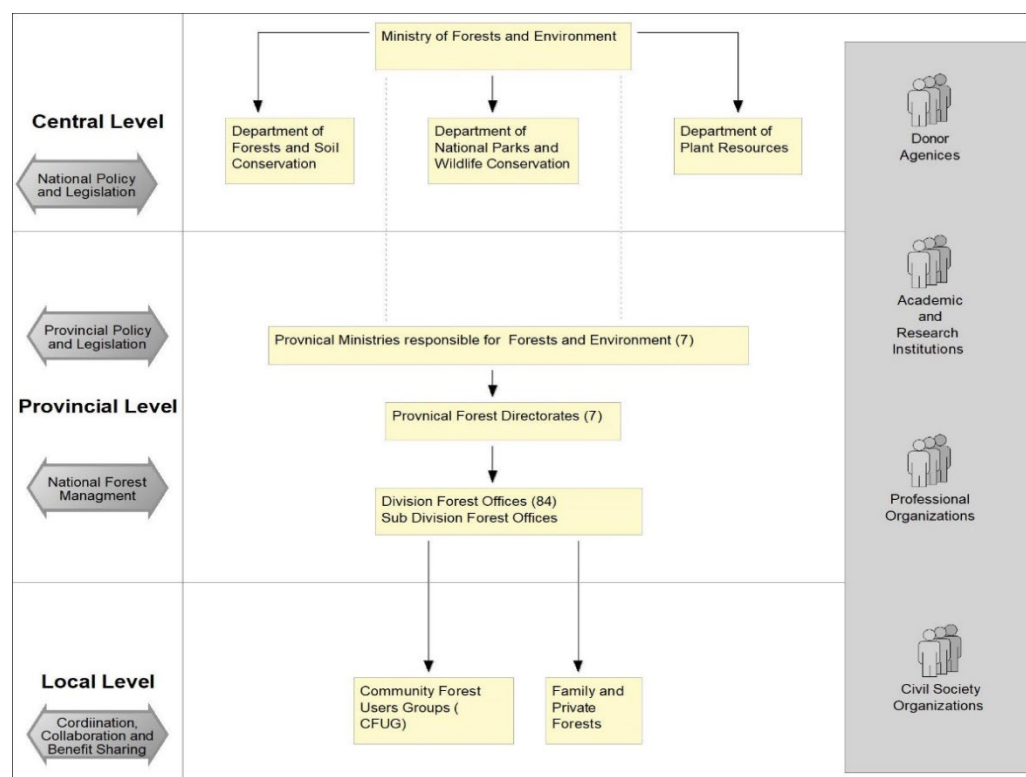


Figure 1. Organizational structure for forestry sector in Nepal (dotted lines suggest only a policy subordination, no operational subordination).

In the case of CF, local forest user committees preserve the forests with technical and legal support from government authorities. Put simply, CF can be understood as an umbrella term which includes various sets of activities which link forest-dependent communities with nearby forests and trees, who benefit from goods and services from forests [21]. There are various legal and policy instruments that helped to establish the concept of CF as an independent, autonomous, and self-governing institution responsible for protecting, managing and using any patch of national forest with a defined forest boundary and user group members

2.2. Nepal Forest Policy Goals

The new Constitution of Nepal [22] has special provisions for protection, promotion, and use of natural resources: it promotes the conservation and sustainable use of forests, wildlife, and biodiversity in general by mitigating possible risks to the environment from industrial and physical development, while also raising public awareness about the environment in order to maintain forest areas in a territory in accordance with ecological balance [22]. The Master Plan for the Forestry Sector (1989) was the first policy response to the perceived need for re-examining the forestry sector and community participation in Nepal [23]. Latest Forest Sector Strategy (2016–2025) aims at managing the forest resources, biodiversity, and watersheds in a sustainable manner so that they can contribute to national prosperity [24], thus awarding a higher social role to forests. Furthermore, Forest Policy (2019)—the most recent forest policy document, formulated after the new federal structure—puts even more emphasis on community participation by aiming at managing forests, protected areas, watersheds, biodiversity, wildlife, and plant resources with a sustainable and participatory approach to enhance production, the value of forest base products and services, and their equitable distribution [25]. The New Federal Forest Act (2019) was

formulated to regulate forest management activities. It has numerous provisions related to forest resource management, focusing on CF to make it more effective in sustainable forest resource management, aiming to protect forest resources whilst also increasing the supply of forest goods and services from all types of forest regimes across the country. It has prioritised the promotion of the CF program wherever possible. Provincial-level Forest Acts are also formulated by provincial governments, aiming at sustainable use of forest resources and enhancing the economic contribution from the forestry sector. Forest management goals are also at the centre of the Fifteenth Periodic Plan (2019/20) prepared by the National Planning commission [26]. CF is also the base for Nepal's periodic plans to achieve United Nations Sustainable Development Goals, particularly in Goals 12, 13, and 15, although the forestry sector contributes to almost all goals either directly or indirectly [12].

2.3. The 3L Causative Benchmarking Model—Adapted to Nepal Conditions

To evaluate the performance of CF as a forest management institution, the 3L model [14] was applied. It uses a set of defined criteria and indicators to evaluate the performance of state forest institutions against the national forestry goals. The 3L causative benchmarking model is based on assessing the interaction between three layers (3L): the layer of public policy goals (how country forestry policy goals are mirroring the principles of sustainable forest management), the layer of socio-economic theories (including recognised economic, political, and ecological theories), and the layer of criteria and indicators (an empirical layer including perceptions over the implementation of elements from the other two layers) [14]. The model works in a comprehensive and reciprocity linkage [27] in two steps: (i) translating vague and generalist language of policy documents (the policy layer) into precise terms by considering science, political, public economics, and business management theories (the theoretical layer), thus formulating clear and science-based criteria; and (ii) using the criteria to evaluate the empirical level, where all identified differences become indicators for institutional performance. In this model, state forest management institutions are divided into two broad categories: (a) management institutions with clear mandates on forest management activities; and (b) authority institutions with regulatory, policymaking, and enforcement tasks [14]. The 3L model was used for evaluating the performance of state forest management institutions in east Europe—Serbia, Croatia, FYR Macedonia, Republika Srpska [28,29], Poland [27], Romania [30,31], the Republic of Moldova [32], and also in countries in other continents, namely Brazil [33] and Tunisia [34], with results that demonstrate the feasibility of the model.

Our process involved assessing criteria and indicators from the theoretical frame of the method, adapting them to local particularities and empirically measuring different documented information and forest stakeholders' perceptions against the adapted criteria. While the methodology provides different criteria and indicators for state-owned forest management (dealing with the operational management of state-owned forests) and for state authority institutions (with regulatory, enforcing, and monitoring roles), respectively, we only applied the part of the methodology that focuses on state-owned forest management institutions. State authority institutions are not the object of this study, due to limitations caused by the COVID pandemic (all the interviews and questionnaires were organized online). In Nepal, state-owned forests are managed by CFUGs; therefore, these institutions were evaluated in this study. Since all CFUGs are operating under the same technical and regulatory framework to achieve sustainable forest management goals, and since they have a strong national-level network, CFUGs were considered as the state forest management institution for this study.

2.4. Data Collection and Analysis

For this study, both primary and secondary data sources were used. Secondary empirical information was collected through forest policy documents [24,25], periodic National Plans [26], annual reports of federal and provincial ministries and departments [16], FMPs

and progress reports of CF [35], technical reports from donor agencies [17], and scientific research papers on CF.

Primary information was collected through participatory observation, semi-structured interviews (performed online due to the COVID pandemic), and an online questionnaire survey. Participant observation—recommended by the methodological framework [27,33] for collecting otherwise inaccessible information—was conducted by the first author of this paper, who has solid experience in forest administration in Nepal. The questionnaire and interviews were based on criteria adapted from the theoretical 3L model. The socioeconomic settings, political regime, and forest management priorities in Nepal are different from the European context. Based on consultations with diverse forestry professionals, policy makers, and researchers, the original 3L model indicators were carefully assessed and adjusted to fit the specific conditions of Nepal. Adapted indicators used for this study were designed in conjunction with community-based forest management initiatives, CF contributions to sustainable forest management, local livelihood and income generation activities, implementation of FMPs, promotion of local governance, and the role and relationship of forestry stakeholders, as shown in Tables 1 and S1.

Table 1. Criteria and indicators for assessing the performance of community forestry in Nepal.

Criteria	Indicators	
	Adapted for This Study Based on Nepal Forest Policy Goals	Original from the 3L Model [14]
C1 Orientation towards market demand	I 1.1 Substantial revenue generation I 1.2 Marketing competency	Market revenue Marketing competency
C2 Orientation towards non-market demand	I 2.1 Sensitization on the concept of ecosystem services I 2.2 Planning for ecosystem service management I 2.3 Revenue generation from ecosystem services	Plan for production/provision of public/merit goods Financial flow for public/merit good production/provision Auditing
C3 Sustained forest stands	I 3.1 Formulation of sustainable forest management plans I 3.2 Implementation of sustainable forest management plans	Obligation of sustaining forest stands Forest management plans
C4 Technical efficiency	I 4.1 Optimal utilization of local resources I 4.2 Managerial accounting	Technical productivity of work Managerial accounting
C5 Profits from forests	I 5.1 Annual economic return from forests	Value of annual operating profit per hectare
C6 Orientation towards new forest goods	I 6.1 Market research and customer needs assessment for new products I 6.2 Product development/business plans for new products	Professional market information Investment in new forest goods
C7 Speaker for forestry	I 7.1 Trustful cooperation with actors from forestry sector I 7.2 Speaker role accepted	Trustful cooperation with actors from the wood-based sector Aspiration towards and acceptance of an advocate role
C8 Mediator of all interests in forests	I 8.1 Trust and cooperation with central, provincial, and local government I 8.2 Mediator role accepted	Trustful cooperation with actors from all sectors Aspiration towards and acceptance of mediator role

Ten semi-structured interviews (Table S2) were conducted during March and April 2021, using support questions derived from the adapted indicators. Policy makers and high-level government officials from federal and provincial ministries, leaders from federations

of forest users, university researchers and representatives of donor agencies were interviewed. At the same time, a survey based on a questionnaire (closed questions with four levels of ranking—high (3), medium (2), low/weak (1), or zero/none (0)—for each indicator) was also conducted to collect information and perceptions regarding the 16 indicators. Fifteen questionnaires were sent online to various forest officials, university researchers, and CFUG representatives—different persons than those interviewed online (Table S3).

Participants for interviews and the survey were carefully selected from different forestry-related roles and responsibilities to capture their extensive experience in community forestry and forestry sector development in Nepal. During the interviews, as well as for the questionnaire survey, confidentiality was carefully maintained for both interviewee and respondent, so that they could express their views in an independent and critical way.

For measuring the performance of CF, empirical data on all the criteria and indicators were analysed. The score for indicators resulted from assessing the results of the online interviews and questionnaires. Combining the indicators helped in determining the scores for criteria on a 4-level scale: high (3), medium (2), low (1), or zero (0), as shown in Table S1. After the analysis, the results were expressed in a spider web chart.

3. Results—Evaluation of CF as a State Forest Management Institution

The analysis of CF as a forest management institution was done based on all 8 criteria recommended by the 3L model methodological frame and 16 adapted indicators (Table S1). The results are illustrated in the spider web chart in Figure 2 and in Table S1.

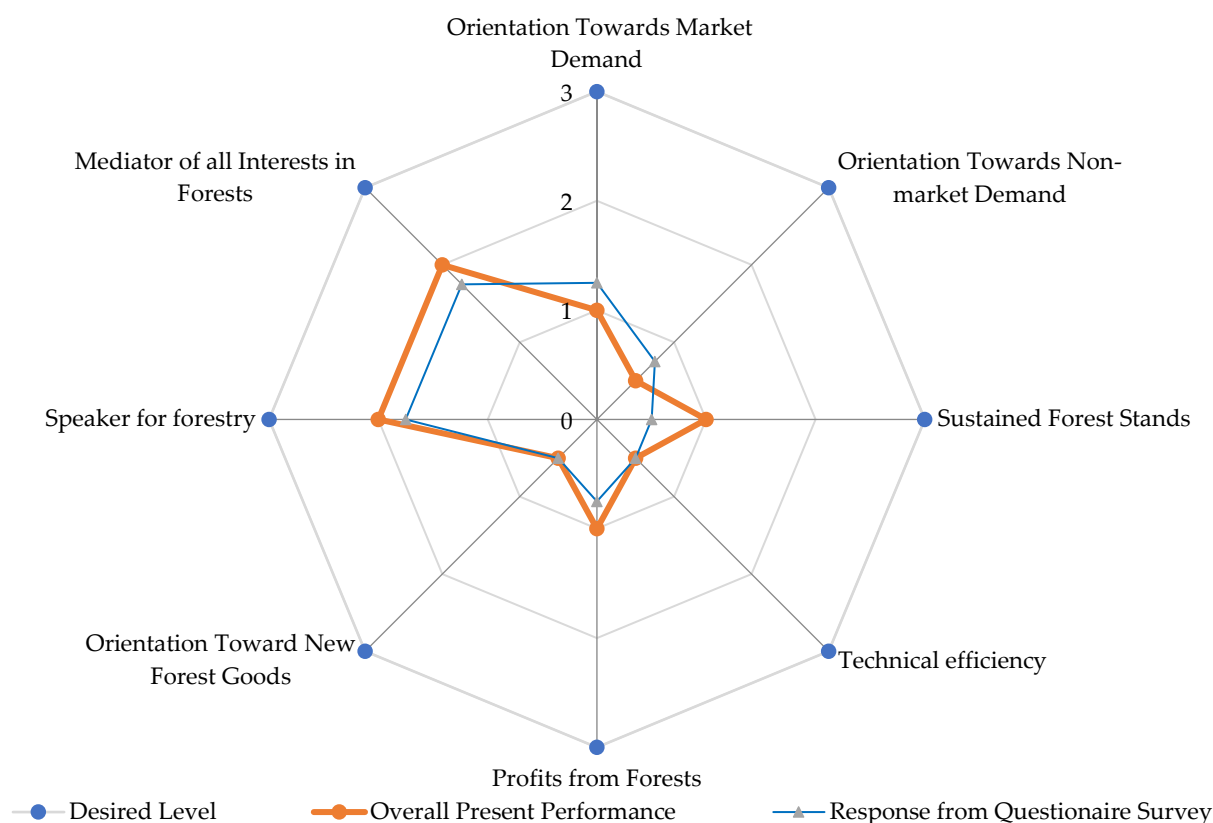


Figure 2. Community forestry performance against the 3L model criteria (national forest goals) in Nepal.

3.1. Criterion 1—Orientation towards Market Demand

Indicator 1.1. Substantial revenue generation. As CFUGs are managing more than 30% of the country's forest land, they also represent the major source of wood in the local market [16]. CF annual revenue generation refers to the annual income from the sale of

timber and non-timber forest products (NTFP), membership fees, penalties, and other revenue sources. During the online structured interviews, all the responses indicated that wood selling is, by far, the most important revenue generator when compared with income from other forest products. Respondents serving as government officials pointed out that wood is generally first sold to CFUG members and, if there is any surplus, then it is sold to other external users and markets. In addition, they also highlighted that most of the CFUGs in mid-hills are only able to fulfil the internal demand, which accounts for very low annual income generation. In the Terai region, where productive forests are managed by CF, timber accounts for a higher proportion of annual revenue. In the case of NTFPs, as pointed out by one of the divisional forest officers (I5), “CF users collect and sell NTFPs in raw form only, which creates a very low price compared to the final market price, reducing annual CF income”. Official data regarding the revenue generation of CF from timber selling [36] indicate an annual revenue at the national level between 0.1 and 0.5 million USD between 2011 and 2019. Responses from interviews and the questionnaire survey also supported the notion that CFUGs are not able to fully utilize forest resources to maximise revenue generation from wood-based products.

Indicator 1.2. Market competency. Most of the interviewees (I1, I2, I3, I4, I5, I6, and I10) said that more than two-thirds of CFUGs have a very low level of knowledge on product promotion. CFUGs are unaware of marketing tools and strategies which could help them to create higher values for forest-based products. Nonetheless, all interviewees agreed that there is high potential for CF to produce and sell forest-based products with new strategies and different marketing approaches.

Performance evaluation. Based on the available literature, government reports, research papers, and responses from interviews, we can say that CF is not performing very well in fulfilling the market demand for timber products. One government report [16] shows that more than 4.5 million cubic feet of timber could potentially be sold annually from community forests, but due to passive forest management practices, only 0.5 million cubic feet of timber is extracted annually. According to the Federation of Forest-Based Industry and Trade Nepal, around 29.4 million cubic feet of timber products were imported from Malaysia, Indonesia, Burma, Vietnam, New Zealand, Denmark, Africa, and Australia in fiscal year 2015/016 [37]. As emphasised by interviewee I7, there has been a huge fluctuation in timber supply because of irregular and unpredictable forest policies and regulations. The score resulting from the closed question survey for this criterion was 1.25. Based on the information presented above, and considering the indicated lack of market competency, the performance for the criterion ‘Orientation towards market demand’ was evaluated as low (1).

3.2. Criterion 2. Orientation towards Non-Market Demand

Indicator 2.1. Sensitization on the concept of ecosystem services. Besides marketable forest products, CF supply various types of non-marketable goods and services that can increase CF revenue. Important environmental services which are associated with the management of CF are biodiversity, carbon sequestration, watershed and hydrological services, and ecotourism activities [38]. The initial scope of CF was to fulfil local demand for timber, fuelwood, and fodder for adjacent communities. Still, most CFUGs are oriented towards marketed goods. As indicated by all the respondents, FMPs reflect the fact that CFUGs are more focused on promoting marketable goods. Most of the interviewees agreed that CFUGs still have a limited understanding of the concept of ecosystem services.

Indicator 2.2. Planning for ecosystem service management. Each CFUG has its own FMP dealing with the overall management of forest resources, with the aim of increasing the availability of forest products whilst also maintaining the condition of a forest. From analysing these FMPs, we found that very few of them include these provisions. Respondents I5 and I6 pointed out that FMPs prepared by CFUGs have no specific activities and action plans for promotion, management, and utilization of ecosystem services within CF.

Indicator 2.3. Revenue generation from ecosystem services. Various users directly or indirectly benefit from environmental and ecosystem services from CF, but due to lack of recognition as well as a mechanism for collecting payment for these services, they are unable to generate income. A key challenge for CF is to develop and institutionalize workable mechanisms of payment for environmental/ecosystem services which they are providing to downstream users [18]. There are few examples of CFUGs gaining some economic benefits from payments for ecosystem services. Some of the CFUGs in eastern Nepal generate substantial revenue from ecotourism activities [26]. CF adjoining to national parks in Chitwan and Bardia also generate income from forest hiking, elephant safari, and boating activities [17,35,39]. The total income from ecosystem services for the whole country is quite low [38].

Performance evaluation. Carbon sequestration, biodiversity conservation, maintenance of water flow and quality, and aesthetic landscape are some of the prominent ecosystem services provided by CF [33]. Still, CFUGs are less interested in income generation activities from biodiversity, ecosystem functions, and other services due to other short-term economic motives. CFUGs are also unaware of the potential positive outcome of managing and promoting ecosystem services and multiple-purpose forest management. The average score for this criterion, resulting from the closed question survey, was 0.75. Based on the above findings, the overall performance score for this criterion was evaluated as very low (0.5).

3.3. Criterion 3. Sustained Forest Stands

Indicator 3.1. Formulation of sustainable forest management plans. More than 22,000 CFUGs are working to manage state-owned forests. They are formally coordinated by DFOs. Each CFUG must prepare a FMP with technical support from state forest technicians. An inventory of all forest resources is compiled prior to forest management planning, after which forest management goals are set accordingly. Before implementing the forest management activities, these plans must be approved by the concerned forest officials in the district. These FMPs have a tenure of 5–10 years, and must be updated and re-approved by the concerned forest authority. However, due to a shortage of technical human resources within forest authorities (DFOs), they are unable to support CFUGs to elaborate and update FMPs in due time. Interviewee I7 pointed out that CFUGs with a lower annual income have less incentive, willingness, and capacity to regularly update CF management plans. There is no exact official data on the status of un-updated forest management plans, but based on unofficial data, and as per the response from interviewees (I1, I2, and I10), around half of the CF forest management plans are backlogged, needing urgent update.

Indicator 3.2. Implementation of sustainable forest management plans. CFUGs are autonomous in implementing forest management activities included in FMPs. Despite the shortages described above related to issues in updating FMPs, the implementation of FMPs has resulted in notable achievements. CF has been successful in reducing the rate of deforestation and forest degradation and promoting biodiversity over the last 30 years. Implementation of the CF program by involving communities has improved forest and biodiversity conditions in the hills of Nepal. Various studies [17,40] have demonstrated a significant improvement in forest conditions under the management of the CF regime. CFUGs have been successful in supplying forest products to forest users for their basic needs without deteriorating the condition of forests. Most of the interviewees (I1, I2, I3, I7, I9, and I10) confirmed this information and agreed that CF has stopped deforestation in the mid-hills and restored greenery. In some cases, especially in the case of forests in the lowlands, where productivity is higher and valuable timber species such as sal (*Shorea robusta*) are abundant, CFUGs are implementing scientific FMPs. These plans are different from the regular FMPs, which are more based on the silvicultural system (irregular shelterwood system) and aim at productive management of forests by focusing on timber products. However, lack of technical support from government institutions has also led to many cases of weak implementation of FMPs, as raised by some of the interviewees (I7): most of the CFUGs in hilly areas are only doing basic operations. All interviewees

acknowledged the issue of weak performance in implementing FMPs by CFUGs, resulting in passive forest management practices.

Performance Evaluation. The elaboration and implementation of sustainable FMPs have an important role in the success of CF. The social part has achieved good results, as community people have been engaged in conservation. The ecological part has been somewhat fulfilled, but FMP implementation is still affected by issues related to the lack of resources for supporting elaboration and approval, often with very low economic benefits resulting from not being able to fully capitalize on forest resources according to the principles of sustainable forest management. In conclusion, overall performance for the criterion ‘Sustained forest stands’ was ranked as low (1.0).

3.4. Criterion 4. Technical Efficiency

Indicator 4.1. Optimal utilization of local forest resources. CFUGs play a key role in managing local forest resources in that they have the right to manage state-owned forest resources. FMPs guide them towards sustainable and efficient forest resource management, although there are signs that, in many cases, despite successful advances in forest conservation, they are not able to capitalize on the full resources of the forest. A study conducted by Chand et al. [41] showed that production efficiency for individual CFUGs in the mid-hills of Nepal ranges from 0.2942 to 0.8298, with an average efficiency of 62.81%. One interviewee (I10) highlighted that the establishment of CF, the context of the local community and social structure, the condition of forest resources, and productivity and support from forest authorities all help to enhance production efficiency.

Indicator 4.2. Managerial accounting. CFUGs operate their own funds and have their own bank accounts, and each CFUG has one elected person as a treasurer to oversee economic activities. CFUGs also coordinate auctions and other bidding practices when selling timber products to markets outside from their regular forest users. However, they do not have dedicated and trained staff to perform the bidding and accounting tasks. All the respondents argued that CFUGs have very low capacity and performance in maintaining robust financial records, performing biddings, reporting.

Performance evaluation. CFUGs manage forest resources with active participation from local forest-dependent communities, but this effort is more oriented towards conservation rather than resource optimization. CFUGs are very weak in financial record management and managerial accounting. There is lack of well-established managerial accounting systems within CF. The score for this criterion, resulting from the survey, is 0.5. In those conditions, the performance for the ‘Technical efficiency’ criterion can be judged as very low (0.5).

3.5. Criterion 5. Profit from Forests

Indicator 5.1. Annual economic return from forests. The selling of various products (timber, fuelwood, non-timber forest products, and ecosystem services) is the source of annual income for CFUGs. Some of the CFUGs with productive forests in the Terai region and some in the hilly region with pine resin and NTFP production and selling have a higher annual income. A report published by a multi-stakeholder forestry program shows that, on average, one CFUG is generating a total income of USD 3370 per year, which equates to USD 49,103,100 per year for all CFUGs across the country [17]. The economic contribution to national economy is quite low, but CF has played a significant role in improving the livelihoods of forest-dependent communities in the rural part of Nepal [17]. Most of the interviewees (I1, I2, I8, I9, and I10) also highlighted that the profitability of CFUGs is rather low.

Performance evaluation. It is very hard to evaluate the overall economic return of CF at the country level because there are huge differences in the annual income of CFUGs. The major factors for this variability are forest diversity, productivity, market access, and creativity of the forest users. While the score from the questionnaire survey is 0.75, the overall performance for this criterion can be ranked as low (1).

3.6. Criterion 6. Orientation towards New Forest Goods

Indicator 6.1. Market research and customer needs assessment for new products. All the interviewees agreed that CFUGs are more inclined towards traditional forest products, i.e., timber, fuelwood, and NTFPs. Most CFUGs are only able to fulfil the local demand of forest products. In general, CFUGs do not have institutional arrangements for marketing, particularly for gathering and assessing market information. Interviews indicated that many CFUGs have sub-committees which work on selling regular timber products to nearby markets; they are still not directed towards creating additional and diversified products. Very few CFUGs are aware of the benefits and co-creation of additional forest products from existing forest resources.

Indicator 6.2. Product development/business plans for new products. Although most CFUGs are still unaware of the potential benefit of new products, some have initiated the idea of developing business plans for new forest products. Some CFUGs have developed business plans for making handmade paper; NTFP cultivation, packing, and processing; essential oil production; sawmilling; veneer production; and juice making and processing. The majority of them are prepared with support from forestry projects and donor agencies, sustained for the project period only [35]. DOFs have also initiated supporting actions for forest-based enterprises within CF; however, these actions have not performed well, as we can see from the numerous policy and bureaucratic hurdles, and the lack of innovativeness mentioned by interviewees I7, I8, I9, and I10.

Performance evaluation. The interviews indicated that product diversification and value addition have been the most significant issues since the initiation of CF program. CFUGs are not able to create and maintain a value chain for forest products, nor have they been able to add value to current forest products. CFUGs are only selling raw products, which have very low value compared to the final market price. The overall performance for the criterion 'Orientation towards new forest goods' is, consequently, very low (0.5). This was the score resulting from the questionnaire survey, too.

3.7. Criterion 7. Speaker for Forestry

Indicator 7.1. Trustful cooperation with actors from the forestry sector. CFUGs as local level forestry institutions are closely connected to forestry sector actors and institutions. There are other various forestry-related actors such as governmental and non-governmental organizations, academic institutions, and donor agencies. Interviewees serving as government officials or federal representatives agreed that there is very trustful cooperation between organizations. However, as pointed out by interviewee I10, some issues (e.g., benefit sharing, property rights and taxes) generate disputes between government and community. Currently, CF is somewhere in the transition stage of managing the diverse interests of forestry actors across central, provincial, and local levels.

Indicator 7.2. Speaker role accepted. CF has been successful in promoting forestry and environmental conservation awareness in the local level since its early days. It has been motivating local and indigenous communities towards forest conservation. CFUGs are working at the frontlines in shrinking deforestation and increasing greenery in the hills. Most of the interviewees (I1, I3, I4, I5, I7, I8, I9, and I10) expressed that CF has aspired to and accepted the role of speaker for forestry.

Performance evaluation. Over the last three decades, CF has faced many changes in terms of policy and institutions. Nepal has recently gone through a change in political system and administrative establishment. This has changed the number and nexus of stakeholders and their interests, but ultimately, CFUGs have performed the role of balancing interests, representing conservation educators at the local level. CFUGs are involved in awareness-raising activities on the importance of forest and natural resources, biodiversity conservation, and environmental protection issues. The questionnaire survey resulted in a score of 1.75. Based on the above information and responses, for the criterion 'Speaker for forestry', the overall performance score was evaluated at medium (2).

3.8. Criterion 8. Mediator of All Interests in Forests

Indicator 8.1. Trust and cooperation with central, provincial and local government. As per the new constitution, Nepal has gone through a new political and administrative system, with three levels of government: federal, provincial, and local. Each of the governments has rights and responsibilities defined by the constitution. The newly formed governments are in the initial stage of their institutionalization. CFUGs are managing national forests under provincial governments. Thus, they are now directly connected to the provincial governments and their organizations. CFUGs are also connected to local level governments in their immediate vicinity. During this time, CF has been successful in maintaining good relationships with all forms of government, which have benefitted from CF's successful implementation. As indicated by most of the interviewees, CFUGs are trying to make themselves comfortable with the new institutions and their role.

Indicator 8.2 Mediator role accepted. CF has always been played a role in managing various interests and conflicts related to forest resource management. At the local level, there is a good example of CFUGs being successful in managing land-related conflicts. CFUGs are always aspiring to succeed in this mediator role and manage interests. All the interviewees pointed out that CFUGs are working as mediators at the local level. The federation of CF users is the largest network of the whole country, so it has the power to influence policy at the national level, too. This federation has been successful in bringing about issue-based dialogues and advocating in favour of community groups.

Performance evaluation. It can be said that CF has aspired to and accepted the role of mediating different interests related to forests; therefore, the overall performance for the criterion 'Mediator of all interests in forests' can be rated as medium (2). The survey results confirm the analysis, providing a 1.75 score for this criterion.

4. Discussion

The Stevanov and Krott [14] 3L causative model is an established model for evaluating the performance of state forest management institution. Using this model for assessing the performance of CF as a state-owned forest management institution in Nepal required some adaptations in terms of indicators due to the particular conditions of the Nepalese forestry sector, thus proving the flexibility of the model and contributing to its global application. The unique Nepalese institutional framework—especially the role of CF in managing state-owned forests—has led to somewhat different results from other countries, as there are fundamental differences in the nature of forest management institution. CFUGs are not governmental bodies but rather community-based organizations, so they have many limitations as well as differences in how they work compared to typical governmental organizations. GFUGs have very limited technical human resources to execute forest management and planning work, which makes them dependent on forest authorities. In other countries, a recent analysis using the 3L model has shown higher profitability and effectiveness and some innovativeness in the forest sector [27,30,32,33]. The Nepal CF case has revealed rather good performance in community participation and the roles of mediator and speaker of forestry, as indicated by high scores for criterion 7, 'Speaker for forestry', and criterion 8, 'Mediator for all interests in forests'. Also, the results demonstrated good results for forest conservation, as shown by the scores for criterion 3, 'Sustained forest stands'. However, our study found lower performance in economic efficiency (low scores for criterion 1, 'Orientation towards market demand'; criterion 4, 'Technical efficiency'; and criterion 5, 'Profit from forests') and innovativeness (criterion orientation towards non-market and new forest goods).

The results of this study, especially the scores for criteria related to sustainability of forest management, confirmed that CF has achieved highly in promoting greenery, stopping deforestation, and involving local communities in forest resource management in a democratic way. However, the analysis showed weak performance in matters related to market, economy, and productive forest management. The results also revealed that CFUGs are still more focused on managing timber-based products, neglecting the opportunity

to expand the market with management of ecosystem services. These rather low scores for economic performance may also be explained by the fact that the new policy has only been in place for the last few years, thus not giving enough time for CF to adapt. Thus, value addition in market and non-market products may be considered as the next step in CF management in Nepal. Lack of awareness, minimal support from technical bodies, and bureaucratic hurdles are factors that are probably lowering CFUGs' technical and production efficiency [41]. Being different from the government institutions, CFUGs lack the technical and managerial skills to perform beyond regular forest protection works. Nonetheless, the results indicate that CF is accepted by all forestry actors as a successful model for participatory sustainable forest management in Nepal, ready to adopt important social and mediator roles, in agreement with the results of other studies [13,42,43]. Besides continuing to perform its social roles, Nepalese CF needs to build the capacity to take the next step beyond basic forest goods and benefits, in order to become an institution that can sustainably contribute to the national and local economy. The results from this study also show that CFUGs are not sufficiently oriented towards commercialization of value-added forest products. Some studies suggest that stronger forest tenure for CF helps in improving forest conditions and increasing forest benefits [44,45]. At the same time, removing the present barriers in the forest product value chain will be helpful in increasing the commercialization of forest products and services.

FMPs are the fundamental platforms for managing forest resources. These plans—with clear objectives for forest resource management approaches, silvicultural methods, forest product marketing strategies, management of ecosystem services and benefit sharing schemes—promote sustainable forest management. This study recommends developing FMPs by including multiple management goals to utilize the multi-functionality of the forests and to maximize benefits from the forest.

Our research suggests that there is significant potential for increasing the market value of ecosystem services, which can significantly contribute to increasing CFUGs' income. Enabling policies, environment networking, innovation, and learning among community groups can foster the proper management of these ecosystem services. At this stage, CFUGs need financial, technological, and legal support from the government as well as non-governmental organizations to promote ecosystem service management. Payments for ecosystem services schemes can act as motivation factor for CFUGs in managing ecosystem services.

This study, in alignment with other studies [46,47], shows that most CFUGs have low financial and technical resources, as well as business knowledge needed to manage forest-based enterprises; furthermore, financial institutions are hesitant to invest in them. Government support must focus on developing technical and business skills, providing adequate technological access, and facilitating business-related startups for CFUGs.

5. Conclusions

This study has proved that the 3L model is flexible enough to be used, providing useful results, under the very special conditions of the Nepal forestry sector. This is one of the most important contributions of this research. Based on the insights provided by using the 3L model, this study reveals that CF, as a forest management institution for state-owned forests, is oriented towards achieving national forestry goals; however, there is still a long way to go before it fully contributes to achieving sustainable forest management goals and performs as per its potential. Successively addressing the perceived issues and then analysing the performance of CFUGs using the 3L model is a positive way forward.

Also, the study confirms that CF in Nepal has more ecological than economical benefits; it is now time to plan and act towards moving from only targeting the basic needs of the communities to really improving their wellbeing.

There are some recommendations that clearly arise from this research:

- Make the regulations more predictable and increase the technical support provided by the state for CF, especially in areas such as product innovation, value addition, and

marketing. CF could significantly enhance its performance when backed by conducive policy instruments and a facilitating role from forest authorities.

- Promote management approaches that are less conservative and more market oriented, without passing the limits of sustainable forest management.
- Create an innovation-enabling environment for CF in areas such as new products and services and formulation of FMPs with multiple management objectives. Focusing on assessment and management of ecosystem services and their potential capitalisation is part of the solution.
- Remove taxes and fees for multiple governmental levels for promoting business activities and expanding the forest product chain.

This study paves the way for new interesting research directions. One of them is the investigation of the effectiveness of authority state institutions in achieving policy goals in Nepal, where using the 3L method would be a good approach. Also, research into forest products and markets or business orientation would be welcomed.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/f13050726/s1>. Table S1: State forest management institution (community forestry) in achieving national forestry goals in Nepal, Table S2: List of semi-structured interviewees, and Table S3: List of questionnaire survey.

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