

Community-Based Forest Management in Nepal: Opportunities and Challenges

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Abstract Nepal's community forestry is considered as one of the popular model of decentralization in natural resource management. The program encompasses a set of policy and instrumental innovations that were especially designed to empower the local livelihoods through the proper management and utilization of forest products. Over the past three decades, the program has undergone a tremendous shift from state-centric and top-down to community-based participatory approach to forest governance by restructuring and reformulating plans and policies related to forest governance in Nepal. Despite the subsequent amendment of legislative and policies, Nepal's community forestry continues to face challenges during its implementation phase. The existing policies and legislation are inconsistent and do not optimally support the pro-poor program, which is one of the major objective of Nepal's community forestry program. Inequitable benefit sharing, exclusion of ultra-poor in decision making system, and elite capture are the major challenges that are to be resolved in coming years.

Keywords CommunityForestry, Livelihood, Pro-Poor, Sustainable Development

1. Introduction

In developing countries, deforestation and forest degradation have become increasingly common, which are advancing at an alarming rate resulting in the conversion of forest area into a mosaic of mature forest fragments, pasture, and degraded habitat[1-5]. It is widely recognized that human intervention in land utilization is associated with exacerbation of deforestation and forest degradation over time[6-8]. In Addition, the dependency on firewood for energy has become a proximate factor that catalyses deforestation and forest degradation in rural parts of the developing countries[9].

In order to mitigate the existing trend of deforestation and forest degradation, there has been a rising interest among researchers and policy makers in developing and evaluating efficient alternative methods of forest management[2]. In recent years, many countries have begun to adopt community-based management of common pool resources (CPRs) as an important land-use policy, with due consideration to local-specific conservation and development requirements[10-12]. In Nepal, the failure of state-controlled forest policies rejuvenated the concept of community-based natural resource management (CBNRM) after

1970s[13]. In 1978, the national government formally adopted CBNRM with the objectives of meeting the subsistence for local livelihoods, restoration of degraded land, economic mobilization, development of technology and promotion of public cooperation, and abating environmental degradation through sustainable forest management[14-16]. Moreover, CBNRM is synonymously conceived as responsibility given to local user groups for forest restoration, protection, utilization and management[17].

The main objective of this paper was to review the current status of community forestry in Nepal contributing to sustainable livelihoods, equity in community forestry management, and the monitoring and evaluation system of the community forests. The institutions and policies related to community forestry have been highlighted. Furthermore, opportunities and challenges in making the decentralized forest governance more successful in achieving the dual goals of environmental conservation and poverty alleviation as envisaged by Nepal's sustainable development framework have been discussed.

2. General Background of the Community-Based Forest Management in Nepal

In Nepal, forest is pivotal for local livelihood practices and national politics since it is crucial for meeting rural livelihood as well as state revenues[14,18,19]. The forest

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management policies can be grouped into three main periods in Nepal namely: privatization (1768-1951), nationalization (1951-1978), and populism or decentralization (1978 onward)[20]. In Nepal, forest policy has been developed and practiced especially in response to the negative impact of the preceding policies[21]. Prior to 1950, forest were managed in traditional indigenous ways, especially by local elites of a feudal autocratic Rana regime in Nepal[22]. After overthrow of Rana regime from the country, the Forest Nationalization Act 1957 was adopted to protect, manage and utilize the forest of Nepal as state property[23,24]. Thereafter, state's control and command approach remained dominant in the forest regime, and the Forest Nationalization Act 1957 was followed by Forest Act 1961[21,25].

Subsequent to nationalization, the government of Nepal formulated the National Forest Plan of 1976 which explicitly recognize the importance of people's participation in forest management[10,21]. The concept of community based forestry and the decentralization of forest management were prioritized only after the amendment of Forest Act 1961 in 1977 and 1978[21,25]. Community forestry programme was initiated with the objectives of fulfilling the demand of the rural communities thereby increasing their livelihood opportunities through the proper utilization of forest products simultaneously enhancing forest conservation as well[21,26]. At the beginning, Nepal's community forestry program was introduced in the mid-hill that provided significant level of autonomy by recognizing perpetual sovereignty of the community forest user groups (CFUGs)[26,27]. Thereafter, it evolved continuously over the years by gaining its popularity among the local users, which is supported by adaptive decentralized and developed policy processes[28,29].

Nepal's community forestry program has met with some notable successes in terms of improving the biophysical and rural livelihoods[16,23,28]. Because of these successes, Nepal is considered as one of the most progressive countries in the world in terms of community forestry and CBNRM is widely recognized an innovative approach to forest management and its governance in Nepal[2,29,30]. The landmark shift of forest ownership to local community appears to have stood to contribute welfare of the poor rural communities and biodiversity conservation in Nepal [26,29,31]. At present, Nepal's community forestry has moved beyond its original goal of fulfilling the subsistence forestry needs of local people, and heralded as an appropriate instrument to help accomplish the dual goals of environmental conservation and poverty alleviation as envisaged by Nepal's sustainable development framework [16,32]. Thus, Nepal's community forestry program is now considered as an important instrument for sustainable development strategy for bringing social change-empowering the marginalized communities[15,16,29,33].

3. Policy Intervention to Community-Forestry in Nepal

Although community forestry programme was adopted with the assumption that handing forest to local communities will become active participants in forest management, it took a decade for Nepal's government to formulate people centered policies in forest sector[21]. The long-term (21 year) Master Plan for the Forestry Sector (MPFS) 1988 refined and extended the community forestry policy in Nepal, and declared that all accessible forests in the hills areas of Nepal should be handed to the CFUGs[34,35].

Table 1. Political history of Nepal's forest regime[21].

Time period	Remarks
Before 1956	Forests were administered as private property
Up to 1846	Era of forest conversion to agricultural land
1846-1950	Privatization of forest by autocratic Rana Regime
1950-1956	Period of transition to convert forest as private property to state property
1957-1990	Forests were controlled as state property
1957-1960	Nationalization of private forest-forests declared as state property
1961-1975	State's control and command approach remained dominant
1976-1986	Emergence of the concept of community forestry-partnership state/community
1987-1990	Formalization of the current forest policy
1991-2005	Forests have been managed as common property
1991-2000	Transition of community forestry principles and policies into practice
2000 onward	Recognition of community forestry as an effective approach of resource management

In addition, the Forest Act 1993 provided full authority to the CFUGs for management of forest resources thereby returning the ownership of forest to the local people[23]. The first amendment of Forest Act 1993 in 1999, and the Forest Regulation 1995 were the major legal instruments that govern the function of the community forestry in Nepal[23,36,37]. After the enactment of the Forest Act 1993, the handing of forest over to the CFUGs became effective in Nepal[25]. Important characteristics of CFUG rights as per the Forest Act 1993 and Forest Regulation 1995 are given below[21,25,36,37]:

- Local communities have rights to form a CFUG as per their willingness, capacity, and customary rights
- All accessible forest regimes can handed over to CFUGs without any limitation on area, geography and time
- Legislation recognizes CFUGs as legal entity, autonomous and corporate body to be governed by their constitution, and can amend or revise their constitution time
- All management decisions are taken by the CFUGs
- CFUGs can have a fund of their own and all income from sales go to that fund
- There will be an equitable sharing of benefits among CFUGs
- CFUGs can decide or fix price and market value for the forest products

• CFUGs can utilize their funds for any purpose, however, 25% of the income must be invested for forest development

Subsequent series of legislative restructuring and reformulating policies, the Forest Act 1993 and Forest Regulation 1995, provided major baseline for local communities to involve in forest protection, management and utilization [23,25]. Community forestry is based on the operational guidelines of the Ministry of Forests and Soil Conservation (MFSC) that is responsible for formulating forest policy in coordination with the National Planning Commission (NPC), while the Department of Forest (DoF) is responsible for the implantation of forest policies designed by the MFSC[38]. In addition, the Community Forestry Division (CFD) that is enforced by the MFSC, is also responsible for the implementation and facilitation of community forestry process in Nepal[23,38]. The District Forest Office (DFO) is another important governmental body that organize the incorporation of local users into CFUGs and issues a certificate or recognition to the CFUGs[18,23]. The Federation of Community Forestry Users, Nepal (FECOFUN), the nationwide network of CFUGs, is also been involved in supporting the development of forest policy sector in Nepal[38,39].

4. Positive Impacts of Nepal's Community Forestry Program

Primarily, Nepal's community forestry programme was initiated to address the problem of environmental degradation and enhance rural livelihood opportunities through the proper utilization of forest products on sustainable basis[16]. After having strong legal backing, the decentralization of forest management in Nepal has been proved to be one of the important activities of CFUGs for generating income at local level[16,40]. The creation of appropriate institutional structure at local, meso, and national levels is considered as one of the important factor for the successful outcome of the CBNRM in Nepal[33]. Similarly, effort to include all social groups in community forestry programme with concomitant democratic process is another pressing stone in the community forestry process[41]. In addition, the community forestry programme provided provision of adequate time and space for frequent discussion, exchange adaptation, discussion and interaction among stakeholders at local level[34]. In recent years, Nepal's community forestry programme is considered as central spectrum for achieving the national sustainable development strategy by focusing on poverty alleviation and Millennium Development Goals attainment[10,16,42].

As depicted in the Table 2, until now approximately 32% (1,350,655 ha) of potential forests areas had been handed over to 15,256 forest user groups (FUGs) benefitting more than 1,782,550 households in different parts of the country[15]. It is estimated that Nepal's community forestry sector contribute over US\$10 million per year to the na-

tional GDP[40]. In recent years, income from community forestry program has encouraged CFUGs to initiate developmental works such as construct roads, build education building, health post and so on[10,16,43,44].

Table 2. Current status of Community Forestry in Nepal[15,45].

Particulars	Remarks
Total land area of Nepal	14.7 million ha
Total forest area	5.5 million ha
Potential community forest area	3.5 million ha
Area handed to CFUGs	1,650,655 ha
No of CFUGs	15,256
Number of beneficiary household	1,782,550

According to Kanel and Dahal[32], the CFUGs spent higher share of their income on forest protection and management (28%), and community development (36%). One of the important impacts of community forestry is the promotion and conservation of biological diversity[16]. Nepal is one of the least developed countries in the world where more than 80% of the population lives in rural areas[46]. Rural areas are often deprive from infrastructure, education, health facilities, and economic opportunities and thus, community forestry program is considered as steering vehicle for rural livelihood[47]. Income generation from different activities including sale of forest products, membership fees, fines from rule violators, and sale of non-timber forest products, is one of the important activities of CFUGs in Nepal[40].

As shown in the Table 3, most of the fund generated from the community forestry program is used for the wellbeing of the local communities. In addition, number of CFUGs has been supported by the livelihoods and forestry program in Nepal in order to make the community forestry programme as pro-poor program[33]. Furthermore, poor and marginalized groups in the CFUGs are provide with community lands to earn their living through the cultivation of medicinal[33].

Table 3. Pattern of national level fund mobilization of community forestry[40].

Particulars	Percentage (%)
Community development	36
Forest development	28
Operational expenditure	14
Pro-poor programs	3
Capacity development	2
Miscellaneous	17

Table 4. Creation of employment opportunities by the community forestry[48].

Particulars	CFUGs ^a	Total ^b	Employment ^c
Forest management	510	63,888	125.19
Community development	340	9,411	27.66
Office management	161	9,153	56.97
Teachers	172	39,137	226.92
Enterprises	95	15,937	168.64
Total	1,278	137,526	605.38

^aGenerating employment, ^bPopulation, ^cPerson days/CFUG/year

Creation of local employment opportunity is another positive impact of community forestry in Nepal[33]. A longitudinal study of 2,700 households from 26 CFUGs in the Koshi Hills clearly indicated the significant role played the community forestry in reducing poverty levels and providing livelihoods opportunities for the households (Table 4)[48]. According to Chapagain and Banjade[48], within the period of 5 years approximately 46% of the poor users (very poor and poor) improved their livelihood after being participated in the CFUGs.

It is been stated that community forestry has provided spaces for women participation considering women also have capacity to make decisions pertaining to village development, resource management and their family concerns[49]. In addition, poor and disadvantaged groups, especially dalits and marginalized communities are also given equal importance in terms of benefits sharing and decision making system[49]. Therefore, Nepal's community forestry is considered as an important vehicle for social change-empowering the marginalized while shifting the property rights from the State to communities[50].

5. Challenges in Nepal's Community Based Forest Management

Despite the multiple functions of community forestry including social, economic and environmental, it continues to face organizational, structural, and societal challenges in Nepal[16,18,32]. Nepal's community forestry sector has been doomed by "passive" management of CPRs due to inequitable distribution of benefits, combined with uneven sense of ownership and motivation among the CFUGs[22,33,42]. Moreover, socioeconomic disparity among users and their dependency on CPRs has become the subject of concerned, when a responsibility of allocating CPRs is delegated to local communities[31,32].

Table 5. Annual collection of forest products by households (n=60)[52].

Forest products	Unit	Well-being category		
		Poor	Medium	Rich
Timber	Cubic feet ^d	95	180	340
Firewood	Bhari ^e	21	18	13
Grass and tree fodder	Bhari ^f	10	33	31
Leaf litter	Bhari ^g	11	42	45

^din a five year, ^e1 bhari firewood= 30 kg, ^f1 bhari grass and fodder=25 kg, ^g1 bhari leaf litter=20 kg.

Social exclusion and inequitable benefit sharing are the major challenges that are to be solved in the community forestry program[21,42]. Although community forestry programme is formally adopted to meet the local demand of the poor rural communities, the livelihood of the poor and disadvantaged groups have not improved as expected [41,42]. The poor, dalits and marginalized communities, who entirely rely on forest products for their livelihood, appear to benefit from community forestry as compared to

elite or wealthier households in the CFUGs[33]. In addition, the elite groups control the forest management decision thereby making the access to forest products disproportionately and exclude poor households from the decision making system[19,42,51,52].

The limitation of livelihood outcomes has been attributed by the two factors in community forestry: (i) due to weak and inefficient internal governance within CFUGs, most of the community forests are captured by elite group, and also there is inequitable distribution of benefit sharing among CFUGs, in which poor and marginalized groups are often neglected[30,53,54], and (ii) despite the productive potential and market values of forest products, CFUG has emphasized stringently to protect the community forestry which further limited the livelihood options for the marginalized groups[55,56].

The current community forestry program lacks good governance in the operation of CFUGs and the relationship with the DFO pertaining to the sale of forest products[32]. For example, CFUGs that sell surplus forest products have to pay 13% of royalty as VAT on products sold, and also have to pay NRs 5 per cubic feet of timber to the concerned DFO as forest development fund[38,57]. In Terai, CFUGs have to pay additional 15% tax on sales of two important timber species namely: Sal and Khair, and thus high transaction cost in the formation and operation of CFUG is another challenge to be resolved in the community forestry [16,29,31,32,38]. One of the weak policies in the community forestry is that forest products including firewood and fodder are divided among CFUGs based on the equality basis, which implies that poor household will not get any incentives in terms of benefit sharing as compared to other wealthier households[19,38]. In general, the major challenges in Nepal's community forestry that have to be amended in coming years are highlighted below [21,32,41,42]:

- Inequitable benefit sharing among CFUGs
- Elite control over the forest management
- Exclusion of poor, dalits, and marginalized groups in decision making system
- Inclusion of the poorest in the capacity building
- Prevalent of high transaction cost during the formation and operation of CFUGs
- Lack of financial audit in the CFUGs
- Issues of access to forest land and forest products for the poor to make the process pro-poor program
- Lack of production and processing of non-timber forest products

Despite Nepal is pioneered in terms of CBNRM, the devolution of forest policy does not guarantee participation of all groups[42,58,59]. Therefore, the possibility of more deliberate forest governance (decentralization of forest management) of forest sector in Nepal lies in the eminence of deliberative interactions among disadvantaged groups including dalits and socially marginalized groups, political elite, donor agencies, and state forest officials[18,29,33,39].

6. Conclusions

Nepal's community forestry programme has been recognized as one of the most successful decentralized modes of forest governance for improving livelihood and conservation of biological diversity. Generation of employment opportunities at local level, improvement of infrastructure, education, and health facilities are some of the benefit result from the process of community forestry in Nepal. Despite providing enormous benefit to the CFUGs, the community forestry continues to face many challenges during its implementation. Inequitable benefit sharing, exclusion of poor and marginalized communities, and elite capture are some of the major challenges that are to be resolved in Nepal's community forestry programme. This review shows that although the community forestry is steered as fulfilling the basic needs for the ultra-poor, the campaign could not improve the livelihood as expected. The existing policies and legislation related to community forestry do not optimally support the sustainable and market-oriented management of the forest resources. In addition, the poor and marginalized groups in the CFUGs are not getting additional incentives so that they can fulfill their livelihood necessities. Therefore, more attention is needed to make CFUGs more equitable, inclusive and pro-poor in practice.

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