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Opportunities and challenges of adopting community forestry: a case study of Nepal

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ABSTRACT

This study aims to investigate the dynamics of forest management handed over to the local user groups in three districts of Nepal with due consideration of local-specific conservation and development requirements. A total of 384 households were interviewed in 24 community forest user groups covering three geographical regions of Nepal. The research findings revealed that there are multiple unresolved issues and challenges in all areas of capital and governance about the community forestry. Poor and marginalized households are inferior and vulnerable, and have less access to forest resources and decision making. In all the study areas, the higher caste holds the supreme power pertaining to community forests and financially weak households are often excluded from the developmental programs. Furthermore, national forest policies are slow to respond change, which become barrier in proper forest management and utilization. The research findings revealed that various types of inputs and services are needed to achieve the dual goals of environmental conservation and poverty alleviation as envisaged by Nepal's sustainable development framework.

1. Introduction

The experience of Nepal's community forestry[1] gained over the past three decades has been marked as devolution of management rights of common pool resources (CPRs) from centralized government to local users group (CFUGs) (Wagley and Ojha, 2002), when national forests were progressively handed to community forest user groups (Kanel and Dahal, 2008; Sapkota and Oden, 2008; Ojha et al., 2009; Giri and Ojha, 2010). Initially, community forestry program was introduced in the mid-hill that provided significant level of autonomy by recognizing perpetual sovereignty of the CFUGs (Springate-Baginski et al., 1999; Springate-Baginski et al., 2003; Ojha et al., 2009). 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 (Gautam, 2009; Giri and Ojha, 2010). The present community forestry and leasehold forestry programs have met with some notable successes in terms of improving the biophysical environment and rural livelihoods (Acharya, 2002; Gautam et al., 2004). Because of these successes, community forestry is widely recognized an innovative approach to forest management and its governance in Nepal and considered as pioneered in terms of community-based natural resource management (CBNRM) (Gautam et al., 2004; Gautam, 2006; Giri and Ojha, 2010).

The master Plan for the Forestry Sector 1988 refined and extended the community forestry policy in Nepal, and declared that all accessible forests in the hilly areas of Nepal should be handed over to the CFUGs (MPFS, 1988; Springate-Baginski et al., 1999). In addition, the Forest Act 1993 provided full authority to the CFUGs for management of forest resources thereby returning the ownership of forest resources to the local people (Acharya, 2002). The landmark shift of forest ownership to local community appears to have contributed to the welfare of the poor rural communities and biodiversity conservation (Sapkota and Oden, 2008; Ojha et al., 2009). Community forestry is now considered as an important vehicle for national sustainable development strategy (Wagley and Ojha, 2002; Gautam, 2009; Ojha et al., 2009; Giri and Ojha, 2010; MOF, 2011). Up to first three months of current fiscal year 2011/12, approximately 25% of potential forests areas had been handed over to 17,685 FUGs benefitting more than 2,177,858 households in different parts of the country (DOF, 2011; MOF, 2011).

Despite the multiple functions of community forestry including social, economic and environmental improvements, there are many unresolved issues and challenges especially in benefit-sharing among the users of the CPRs as well as the governance aspects in Nepal (Sapkota and Oden, 2008). Although the CFUGs have succeeded in terms of their institutional capacity to get people organized and form capital at group level, the livelihoods of the local forest dependent communities, particularly the poor and underprivileged groups, have not improved as expected (Springate-Baginski et al., 1999; Kumar, 2002; Springate-Baginski et al., 2003; Pokharel, 2004; Adhikari, 2005). According to Graner (1997), the paradigm shift in forest management from state-controlled to community ownership in Nepal, has not necessarily helped to improve the livelihoods of the marginalized households. Furthermore, there is persistent disparity among the CFUGs in decision-making about forest management as the poorest and marginalized groups have been excluded and underestimated (Adhikari et al., 2004; Pokharel, 2004).

Nepal's community forestry sector has been shadowed by inequitable distribution of benefits, combined with uneven sense of ownership and motivation among the forest user group (FUG), which has resulted in passive managements of CPRs (Pokharel, 2004). Moreover, socioeconomic disparity among users and their dependency on CPRs has become the subject of concerned (Sapkota and Oden, 2008). Thus, this paper aims to analyze the opportunities and challenges of management of forests handed over to the CFUGs in three districts of Nepal.

2. Materials and methods

This study was undertaken in three districts, Nawalparasi, Lalitpur, and Baglung, covering all the geographical regions of Nepal, namely Terai, Mid hills and High hills. In order to explore the status of forest management under

[1]Community forests are a component of national forests managed by Community Forest User Groups (CFUGs); most of these forests are degraded or have been recently planted by the government or local communities (Wagley and Ojha, 2002).

CFUGs, three clusters were randomly selected from each district such as Lamatar cluster of Lalitpur district, Nawalpur cluster of Nawalparasi district and Kusmi-Sera cluster of Baglung district. The majority of the households in the sampled districts were subsistence farmers who depend on forest resources such as firewood, timber, fodder, and non-timber forest products (NTFPs).

Initially 58 CFUs were selected for general study and then 24 CFUGs were selected for detailed study. Purposive sampling was carried out with due consideration of the size of CFUGs, date of establishment of the CFUGs, income and poverty levels, and presence of social groups in the community. Baseline information was collected at three levels: (i) household; (ii) CFUG; and (iii) cluster-wise. **Table 1** depicts the total selected CFUGs and sampled cluster-wise CFUGs in the three districts. The data were collected during the year 2009 in Nepal.

Table 1
Cluster-wise selected CFUGs and sampled CFUGs.

Selected districts	Total selected CFUGs	Sampled cluster of CFUGs
Lalitpur	15	Lamatar (6)
Baglung	28	Kusmisera (12)
Nawalparasi	15	Nawalpur (6)
Total	58	24

Community forestry has been in existing and some are in the process of handing over to local user in the sampled districts, and therefore provides a suitable case study in which marginalized communities are often excluded in the program. This analysis not only permits us to assess the significance of community forests in determining households economic conditions, but also to measure relative importance of equity and benefits-sharing among the users and their dependency on CPRs.

An in-depth household interview was carried out by employing a self-administered questionnaire survey. Questionnaire survey interview is effective in collecting detailed information on family background, personal characteristics, daily experience, and household's community context at a time (Bohra and Massey, 2009). A total of 384 households were randomly selected for the face-to-face questionnaire interview. Questionnaires were prepared in Nepali language for the convenience of the respondents. The questionnaire was designed to assess impacts of community forest in the households of our target population and consisted of different parameters. The first part of the household questionnaire concerned demographic structure such as caste, gender, family member, and occupation. The second part of the questionnaire concerned agriculture practices such as type of land ownership, cropping pattern, production of food grains, and numbers of livestock. The third part of the questionnaire concerned socio-economic information such as health, education, annual income, and sources of income. The fourth part of the questionnaire concerned issues related to natural resource management and utilization. The fifth part of the questionnaire concerned about household awareness in CBNRM.

Similarly, elicited detailed qualitative data about community forests and rural livelihood experiences were also collected through informal, loosely structured, and open-ended key informant interviews. A total of 40 key informants were selected from a range of categories in order to represent the broad interests and perspectives in studied communities. The interviewed key informants were: local entrepreneurs, school-teachers, CFUG executive committee members, users and excluded users of the studied CFUGs, and elderly community members. Additionally, 48 focus group discussion (FGD) was carried among CFUGs. The main objective of the FGD method was to encourage the participation of occupational castes and to hear their voices regarding their access to local resources and their involvement in decision making system. To facilitate interpretation of the survey results, key findings collected through mixture of approaches are included in the results and discussion section below.

3. Results

3.1. Present status of community forestry in sampled districts

Although the government of Nepal formally adopted community forestry program in 1978, the momentum of handling over of national forests to local user groups took place in all the studied districts after introduction of Forest Act 1993 and Forest Regulations of 1995. In Lalitpur District most of the CFUGS are relatively matured as compared to Baglung and Nawalparasi Districts in terms of managing community forests as they are on average 10

years old. In all the sampled districts, the forest area per household (0.60, 0.32, and 0.52 ha in Lalitpur, Baglung, and Nawalparasi, respectively) is found to be less than the national average community forest per household (0.73 ha) (DOF, 2011).

Most households in the sampled districts are primarily dependent on agriculture for raising their livelihood, often supplemented by livestock and animal husbandry. Firewood, timber, fodder, leaf-litter, and non-timber forest products (NTFPs) are the main forest products harvested from the community forests to meet subsistence requirements. Firewood is used for heating and cooking as well as use for lighting by households not having access to electricity. Timber is mainly used for construction of building and manufacturing farm implements. Palatable fodder-tree leaves are fed to the animals especially during winter period when the ground forage is in shortage. However, all community forests are not in the condition to supply full requirements of forest products to the users.

The contribution of community forests in fulfilling basic needs of user households is found to be variable across the three sites. In Lalitpur District, out of 15 CFUGs only six CFUGs including Gomati, Kafle, Kapre-Chhap, Manedanda, Patle and Patle-Chhap are able to supply needed forest products from the community forests to the users. As depicted in the **Table 2**, CFUGs in Lalitpur District generate substantial income from timber and other sources[2].The annual income of the CFUGs in Lalitpur was very low as compared to Baglung and Nawalparasi. Some community forests in Lalitpur are distributing forest products free of cost to the local users, however, user household has to pay a small amount of NRs[3] 10 to 50 as membership renew.

Table 2
Annual financial summaries of the sampled community forests.

District	Timber	Firewood	NTFPS	Other Sources	Total income	Total expense	Balance
Lalitpur	163950	54585		70200	288735	267735	21000
Baglung	91000	137800	148780	32675	408915	185340	207315
Nawalparasi	5764950	1961470	109000	64900	7157820	6881412	284696

The forest conditions in Nawalparasi are much better as compared to hilly areas. The region is located in sub-tropical climate and thus, has many commercial timber species. Economically, the CFUGs in Nawalparasi are much stronger than that in Baglung and Lalitpur. Most of the sampled CFUGs have their own building and well-furnished office. The CFUGs are comprised of various castes and ethnic groups with different socio-economic and cultural backgrounds. The Brahmin[4] and Chhetri have controlled the governance of the community forests in all the sampled districts. Whereas Janajatis[5] and Dalits[6] have less power regarding access to benefit-sharing and decision making in the CFUGs. Most of the power related positions such as chairperson of Village Development Committee (VDC), secretary, chairperson of community forests, treasures and other organizations pertaining to community forests are occupied by these two castes. Most of the dense patches of natural forests are under the control of the Brahmin and Chhetri and they are claiming the forests as their own.

[2]Other sources denote the amount collected from penalty, renewable of membership and donation of individual and institutions.
[3]1 US$= 88 NRs as of September 7, 2012.
[4]Brahmin and Chhetri are considered as higher castes in Nepal. These people have socially and politically dominated the country for a long period of time. The Brahmins are the priestly class of Indo-Aryan origin, known as Bahuns in Nepal. Brahmins are considered higher caste than the Chhetries, however other than this minor distinction the two castes share many similarities. Both of these people hold strong position in country's government, education, business, and access to resources in Nepal.
[5]Janajatis are generally non-Hindus with their distinct identities regarding religious beliefs, social practices and cultural values. Throughout the history of Nepal, Janajatis have been marginalized in terms of language, culture, political and economic opportunities. Gurungs, Sherpas, Thakalis, Tamangs, Rais, Limbu, Magar, etc.
[6]Dalit is a self-designation for a group of people traditionally regarded as untouchable in Nepal. Dalits are a mixed population of numerous caste groups such as Kami, Damai, Sarki and so on. Historically these groups have been associated with occupations regarded as ritually impure such as blacksmith, butchering, dhobi, removal of waste etc. These people have restriction on many social lives such as they could not enter on a temple, could not enter inside higher caste people houses, and are often excluded from the developmental programs.

Although community forest program in Nepal is aiming to reduce the level of poverty in country through the efficient management of natural resources, many Dalits have been excluded from the benefit of community forests. It was found that Kami people are intentionally excluded from the community forest because these people require charcoal for continuing their traditional smithy work and most of the forests are not in the condition to supply sustainable charcoal to them.

In Baglung, the Janajatis were found economically more active than those of Brahmin and Chhetri. The Janajatis especially Gurung and Magar people were engaged either in British Army or abroad employment, and these people hold higher public positions in most of the regions. In Baglung, CFUGs were more focused on NTFPs rather than timber production. The CFUGs sell ground-grass and fodder and also harvest traditional fiber like the Himalayan giant nettle plant from the community forests. However, in Amalachaur VDC of Baglung, there are five community forests in the surrounding where approximately 100 households of Dalits (Kami) were excluded from community forest program. In the case of Nawalparasi, Magar and Kumal people were excluded due to their poor economic condition since they are not liable to pay NRs 100 as membership for the CFUGs. Similarly, in the Dhuseri community forestry, new immigrants in the locality were excluded from the community forest program.

3.2. Monitoring and evaluation system in the sampled community forests

In the sampled districts, it was found that the provision of monitoring and supervision system pertaining to community forest is not as effective as it has to be. **Table 3** depicts the types of existing monitoring and supervision system in the studied districts.

Table 3
Existing monitoring and supervision system in the studied CFUG

Monitoring and evaluation system of CFUGs	No of CFUGs	Percentage
Forest office (DFO, AFO and Range Post)	14	24.13
CFUG monitoring committee	11	18.96
Self-monitoring	20	34.48
All of the above	4	6.89
No monitoring	9	15.51
Total	58	100

Only 11 CFUGs have formed a monitoring and supervision committee from the local users for managing the community forests. Whereas, in remaining 47 CFUGs do not have provision of systematic monitoring and supervision of community forests and therefore, there is possibility for illegal action of harvesting forest products and other ill practices of forest governance. Moreover, District Forest Office (DFO) and Area Forest Office (AFO), which have the power to monitor and hand over community forests, are taking only 14 CFUGs under their control.

3.3. Dispute and ways for resolving it in the community forests

Table 4 shows the causes of conflict in the sampled CFUGs. In Nepal, dispute is the common phenomenon wherever the issues of resource come. Conflict among the CFUGs was also common in the sampled CFUGs. Respondents were asked to mention about the main reasons for conflict in the community forests, and forest encroachment remained the primary reason of dispute among the CFUGs. Generally, the forest area is encroached by marginalized and landless households as well as by neighboring users. According to the interviewed key informants, most of the conflicts were resolved with mutual understanding among the CFUGs. However, if the case could not be solved within the CFUGs it will be solved either by DFO or District and Central Federation of Community Forest Users Nepal (FECOFUN) or international organizations non-governmental organizations (INGOs) working with the CFUGs.

3.4. Linkages and supports for community forests

The research findings revealed that there were no encouraging linkages and support for the CFUGs. As depicted in the **Table 5**, majority of the CFUGs have good relationship with forest office including DFO, AFO, and Range Post. These CFUGs received technical and advisory supports from forest office routinely with particular emphasis on forest management and utilization. In recent years, FECOFUN is actively involved in improving the

livelihood of the marginalized communities by providing both technical and financial support to the CFUGs. However, the sampled CFUGs have short history about involvement of non-governmental organizations (NGOs) and INGOs.

Table 4
Underlying causes of conflict in the studied CFUGs.

Cause of conflict	No of CFUGs	Percentage
Misuse of fund	6	10.34
Encroachment in community forest area	9	15.51
Inequity of benefits-sharing	4	6.89
Power relation within members	4	6.89
No conflict	35	60.34
Total	58	100

Table 5
Linkage of studied CFUGs with other institutions and organizations.

Name of organization and institutions	No of CFUGs getting support	Percentage
Forest Office (DFO/AFO/Range Post	16	27.58
FECOFUN	6	10.34
NGOs/INGOs	2	3.44
VDC and DDC	1	1.72
Forest office and FECOFUN	21	36.2
Forest office and VDC/DDC	2	3.44
The first four	9	15.51
Others	1	1.72
Total	58	100

4. Discussion

Community forestry is synonymously conceived as responsibility given to local user groups for forest restoration, protection, utilization and management (Chhetri and Pandey, 1992). The research findings revealed that Nepal's community forestry program offers both opportunities and limitations to achieving sustainable livelihoods of the local users. Majority of the households in the studied areas depend on subsistence farming, often supplemented by livestock and animal husbandry. Thus, up to some extent community forests reduce the dependency of local people on natural forests. The survey findings indicate that the community forests under the CFUGs are improving which not only provide basic requirements to the users but also enhance the natural asset and ensure the sustainability of their livelihoods.

Income generation at local level is one of the important activities of CFUGs in the sampled community forests. Although the revenue is not substantial, all the CFUGs in three districts are generating income from community forests. The CFUGs generate income from various sources such as sale of forest products (timber, firewood, and NTFPs), membership fees, and amount collected from rule violators. The generated income is primarily used for maintaining the community forests and strengthening its institutional capacity including building communal office, salary for staff, and the remaining balance is accumulated in the CFUGs fund. The fund generated due to community forest has encouraged CFUGs to initiate developmental works such as to construct road (Gautam, 2009). In Nepal, the government has made a provision that at least 25% of the income generated from community forest must be invested for forest development (Gautam et al., 2004). It is estimated that Nepal's community forestry sector earns over US$10 million and thus, forest products contribute a major share in the national GDP (Kanel and Niraula, 2004).

In recent years, Nepal's community forestry has moved beyond its original goal of fulfilling basic forest requirements and addressed the local livelihoods by envisaging community forestry as medium to alleviate poverty and promote environmental conservation (Gautam, 2009). However, due to socio-cultural, economic, and

institutional factors at the community level, marginalized households were excluded from the community forestry in the studied areas. Mostly, Dalits and poor households were excluded from the program. Although Nepal's community forestry is renowned for improving the livelihoods of the forest dependence local users, the voices of the low caste and poor people were dominated by the high caste in the studied districts. Currently, the community forestry in three districts is suffering from lack of good governance, sustainable forest management practices, and unequal benefits-sharing.

Moreover, the policy governing the community forestry in itself is exclusionary (Khadka, 2009). The policy does not recognize social concepts in managing CPRs. In addition, the policy entirely focuses on scientific forestry ideology in the terms and conditions of partnerships. Additionally, the provisions articulated in the legislation are not conducive to the poor and illiterate participating in the executive bodies of CFUGs. Furthermore, the policy recognizes the power relationship between the state and the community; however it does not recognize the role of power of local elite over CFUGs (Khadka, 2009). Given the unequal social structure there is unequal access to decision-making, and benefits-sharing in all the sampled CFUGs. Although the concept of community forestry recognizes people's participation, the department of forestry has supreme power over the mobilization of CFUGs and thus, the poor and low caste people are always excluded in the developmental programs.

Nepal's community forestry sector continues to face organizational, structural, financial and societal challenges although it has able to display notable successes in several fronts over the 30 years (Gautam, 2009). It was found that most of the community forests were insufficient to meet current households demand in the sampled CFUGs. The mechanism of extraction and distribution of forest products are unequal and are often against the interest and needs of the poorer households. Some marginalized households do not have alternative source to meet their daily needs, especially firewood and are not in the position that they can buy other commercial energy sources including liquid petroleum gas (LPG) and kerosene. The CFUGs do not take into consideration of these economically paralyzed households rather they are excluded from the program. Thus, in order to make the community forestry more productive, equitable, inclusive, and pro-poor in practice, special attention is needed favored with good governance.

5. Conclusions

Nepal's community forestry program is one of the most successful common pool resources management strategies, which is well documented and replicable worldwide. Although community forestry program has improved forest condition and livelihoods in many cases, it has several shortcomings. Nepal's community forestry continues to suffer from many challenges and limitations such as historically rooted inconsistent policies, unstable broader political governance, poor financial capacity, and a weak institutional structure. The survey findings revealed that underprivileged groups are often excluded from the decision-making and benefits-sharing of the CPRs. Due to unequal distribution of benefits, combined with uneven sense of ownership and motivation in the CFUGs, Nepal's community forestry has been resulted into "passive" management of forests. Furthermore, monitoring and supervision of community forests from CFUGs to different levels of governance are less consultative and interactive, leading to inequitable outcomes. Therefore, in order to make the community forestry sector as pro-poor programs, the CBNRM needs to engage directly with social change and provide room for poor and marginalized people to attend and speak in the decision-making system.

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