



Tropentag 2009
University of Hamburg, October 6-8, 2009

Conference on International Research on Food Security, Natural
Resource Management and Rural Development

Does Community Forestry Contribute to Poverty Reduction? An Evidence from Nepal

Baral Sony ^{1*}, Sekot Walter ² and Vacik Harald ³

¹Asia Network for Sustainable Agriculture and Bioresources (ANSAB), Kathmandu, Nepal

^{2,3} University of Natural Resources and Applied Life Sciences, Peter-Jordanstr. 82, A-1190 Vienna, Austria

Introduction

Community forestry, which was initiated in Nepal during late 1970s, is considered one of the successful programs in forestry sector of Nepal for conserving and supplying basic household requirements such as timber, fodder and fuelwood. However, contribution of community forestry in reducing poverty is always a matter of discourse. Community forestry is being criticized of being under elite domination (Thoms 2008). It is frequently argued that the poorer households of community forest user group (CFUG) are getting considerably less benefit from community forestry than better off households (Malla et al. 2003 and Pokharel and Nurse 2004). Generally better off households in CFUG are less depends on community forest as they possess large landholdings which fulfill their major requirement of fuelwood and fodder. On the other hand better off households mostly are in key positions of decision making forums (Gauli and Rishi 2004 and Thoms 2008). Being in the key positions and low dependent on community forest, they usually enforced strict regulations in harvesting forest products for the shake of conservation (KC 2004). This has resulted in underutilization of community forest resources (Khanal 2002). Pokharel and Nurse (2004) have suggested for active community forest management by commercializing their forest products for the betterment of poor users. In recent years, some CFUGs have been adopting commercial forest management to manage their resources (Gauli and Baral 2008). In order to see whether commercial management of community forest is contributing to poor's households this study did the economic analysis of two community forest user groups in Dolaka district.

Methods

The study was conducted in Kalobhir and Bhitteripakha CFUGs of Dolakha district, which is located about 150 km east of Kathmandu, the capital city of Nepal. Required data for the study was collected from July to September 2007. In order to collect data, all the households in the studied CFUG were first classified into four economic groups- very poor, poor, medium and rich with the help of participatory wellbeing ranking methods (see Gauli 2003 for detail). Required data for the study was collected through household survey using questionnaire. 25% households were selected randomly from each economic class. Detailed information was collected on types and quantities of forest products collected for both commercial and subsistence uses. Quantity of forest products used for subsistence use was converted into monetary value through indirect pricing methods as described by Gregersen et al. (1995). Apart from the household survey, two group discussions were also conducted. The data was analysed using Statistical Package for Social Science (SPSS). Kruskal-Wallis test (a non-parametric test) was used to see the difference

¹ Contact author: Sonybaral@gmail.com

in income from community forestry among different economic classes. Lorenz curves were plotted to see the contribution of community forestry in reducing income inequality.

Results and Discussion

The Kalobhir and Bhitleripakha are located at about 55 km and 10 km east and west of Charikot, district headquarters respectively. Total number of households in each economic class is presented in table 1. The major occupations of the users of both CFUGs were agriculture, public service, small business and wage based works. The forest covered 545.25 and 362.31 ha area respectively, and had a climatic variation of sub-tropical to sub-alpine.

Table 1: Number of households in each economic class

Economic Class	Total households (Kalobhir)	Total households (Bhitleripakha)
Very Poor	23 (6)	35 (9)
Poor	39 (10)	60 (16)
Medium	106 (27)	88 (22)
Rich	47 (12)	51 (13)
Total	215 (55)	234 (60)

Figure in the parentheses indicates the respondent surveyed

Resource management approach

The CFUGs were commercially managing their timber, fuelwood and NTFPs. The CFUG had depot to sell surplus timber and fuelwood. There is handmade paper enterprises situated within the CFUGs and *Dhasingare* distillation enterprise about 5 km west from the Bhitleripakha. They used to sell *Lokta* and *Argeli* to the hand made paper enterprises and the users of Bhitleripakha used to sell *Dhasingare* to the distillation enterprise. *Lokta* and *Argeli* were used as raw material for producing Nepali hand made paper and *Dhasingare* was used to extract essential oil.

The CFUGs had regulated the overharvesting of forest products by executing ban. The users were only allowed to harvest forest products when the committees take the decision to open the forest for the purpose. The forest products that the users were getting from the forest were timber, fodder, fuelwood, leaf-litter and NTFPs. The users were allowed to harvest and sell forest products except timber without paying any fee to the CFUGs. They would only get timber to construct or renovate their houses after paying required fee to the CFUGs. However, very poor users should not have to pay any fee for timber required to construct or renovate their houses.

Royalty and/or profit from selling timber and fuelwood, membership fee, donation from governmental organisations (GOs)/NGOs and royalty from NTFPs were the major sources of income of the CFUGs. The CFUGs had invested its fund in forest development activities such as thinning and pruning of the forest, hiring forest guard etc and community development activities such as providing financial support to school, constructing foot-trails in village and conducting pro-poor programs. Under pro-poor program, the CFUG had provided financial support to very poor households for potato cultivation, poultry farming, goat farming. All these supports were conditional; users must pay back within three years after they start to get benefits. All the very poor users' households of Kalobhir and two of Bhitleripakha were share holders of the paper enterprises. Likewise, five very poor households were share holders of *Dhasingare* distillation enterprise. Most of the pro-poor programs in the CFUG were supported by GOs and NGOs.

Benefits from community forestry program

Benefits from community forestry were studied in terms of cash income and subsistence forest products used. Cash income covers all income from selling fuelwood, NTFPs, and working as labour in harvesting timber from the forest. In addition, it also includes income from forest based

enterprises and income generation activities supported by the CFUG. Subsistence forest products include timber, fodder, leaf-litter and fuelwood used for household consumption. The results show that in both CFUGs poor has highest share in cash income where as medium class has highest share in subsistence forest product. This could be because poor are mostly involved in extracting and selling of different forest products such as fuelwood and NTFPs. As Kalobhir is close to market area selling fuelwood is the one of the important cash income sources to many poor users. Likewise poor users of Bhitleripakha used to sell fuelwood to the handmade paper enterprise. The values of cash income in table 2 show that there is significant difference amount different economic class in cash income from CF.

Table: 2 Share of different economic groups in income of CFUGs

Economic Status	Kalobhir			Bhitleripakha		
	Cash income %	Subsistence value %	Total %	Cash income %	Subsistence value %	Total %
Rich	20.9	29.6	26	10.6	28.8	23.7
Medium	13	33.5	25.1	17	32	27.8
Poor	45.1	21.5	31.2	49.1	25.1	31.8
Very Poor	20.9	15.4	17.7	23.3	14.2	16.7

The highest share of medium class in subsistence forest products could be better off households generally had more land-holding and livestock-holding. They used to harvest more fodder to feed their livestock and leaf-litter for making compost. In addition, they had an access to the most valuable forest product-timber, which CFUG provide only to construct or renovate users' houses. According to the participants in group discussions, poor and very poor generally had small hut type houses which did not require timber or require very small quantity to construct. In a similar study conducted by Malla et al. (2003) they have argued that poorer households were significantly less benefited from community forestry. As forest products in their study sites were only used for subsistence use their results support the finding of this study. The shares of very poor users were least in all cases. It could be because generally very poor uses had very less land and livestock and they were mostly old and handicraft people. Hence neither they need more subsistence forest product nor can go forest to collect and sell NTFPs.

Table 2: Chi-square value of income from CF among different economic classes

	Cash income	Subsistence	Total
	value		
Kalobhir	13.43**	6.82	3.25
Bhitleripakha	0.026*	0.026*	38.89**

* significant at 0.05 level, ** significant at 0.001 level

In total community forestry benefit, poor had the highest share. This indicates that poor were the most benefited from community forestry. The involvement of poor in both cash earning and subsistence forest products made them to be benefited the most. Although very poor had high share in cash income their share in overall benefit from community forestry is least. As they possess very less land and livestock their requirement of subsistence forest products was low.

Income distribution and inequality measures

To see the contribution of CF in poverty reduction Lorenz curves of household income with and without CF income was plotted. The Lorenz curves of both CFUGs shows that the households' income with CF income is close to the line of equity implying the positive contribution of CF in reducing income inequality in communities.

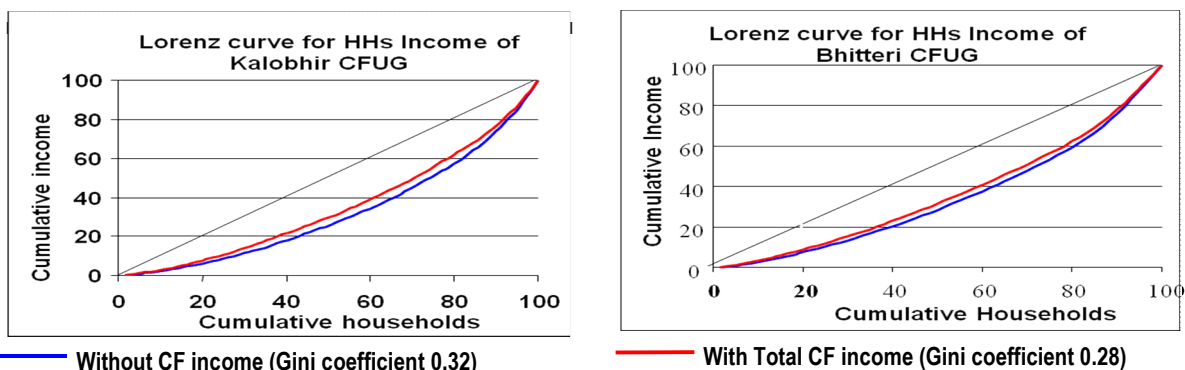


Figure 1: Lorenz curve for HHs income with and without CF income

Conclusions

Community forestry is getting considerable attention in recent years for its potential to reduce poverty. This study has analysed the economic contribution of community forestry to different economical classes in CFUG. Based on the results, this study concludes that CFUG operating in enterprise mode by commercializing its forest products as well as supporting pro-poor programme provides more benefit to poorer users. As poorer households have low capacity to consume subsistence forest products they can only be benefited from commercializing forest products and conducting pro-poor programs. Hence, this study underscores the importance of commercial management of community forest with pro-poor programs in order to reduce poverty.

Acknowledgements

The authors gratefully acknowledge financial support for the fieldwork through OeAD (Austrian Exchange Service). Special thanks go to users' Bhitteripakha for facilitating field data collection. At last but not least, the authors thank Kalyan Gauli for his support for reviewing paper.

References

- Acharya R.P. 2005. Socio-economic impacts of community based forest enterprises in mid hills of Nepal- Case Study from Dolakha District. *Banko Janakari* 15(2):54-58.
- Gauli K. 2003. *A behavioural assessment of user groups in context community forestry program of Nepal: A case study from Western Terai region of Nepal*. M.Phil. Thesis submitted to Indian Institute of Forest Management. Bhopal. India.
- Gauli K. and Baral S. 2008. Community forestry in Nepal: Conserving resources with economic incentive. In: Splechtna BE (ed) Proceedings of the International Symposium: Preservation of Biocultural Diversity – a Global Issue, May 6 – 8, 2008. BOKU University, Vienna, pp 119-124.
- Gauli K. and Rishi P. 2004. Do the marginalized class really participate in Community Forestry? A case study from western Terai region of Nepal. *Forests, Trees and Livelihoods* 14:137-148.
- Gregersen H.M., Arnold J.E.M., Lundgren A.L. and Contreras-Hermosilla A. 1995. *Valuing forests: context, issues and guidelines*. FAO. Forestry Paper 127:1-53.
- KC A. 2004. Extraction of NTFPs from the community forest: Analysis of benefit distribution pattern in household level. *Forest and Livelihood* 4(1):38-43.
- Khanal K.P. 2002. Under utilization in community forestry: A case study from Lalitpur District. *Banko Janakari* 12(2): 26-32.
- Pokharel B.K. and Nurse M. 2004. Forests and people's livelihood: Benefiting the poor from community forestry. *Journal of Forest and Livelihood* 4(1):19-29.
- Thoms C. A. 2008. Community control of resources and the challenge of improving local livelihoods: A critical examination of community forestry in Nepal. *Geoforum* 39 (3):1452-1465.