

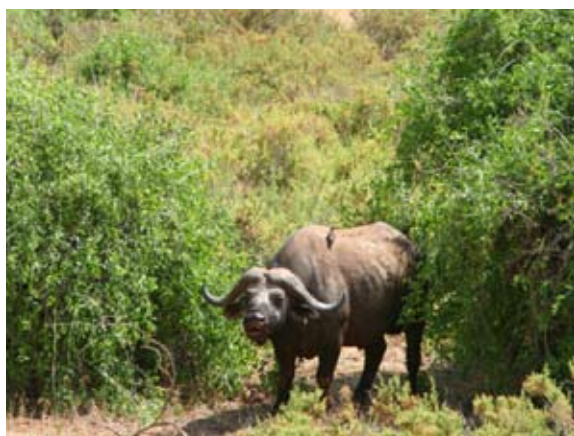


Making the Link Between Forests and Poverty Reduction

A Resource Valuation Study from Kenya

Abstract

This CEEPA study from Kenya finds that forests play an important role as an economic 'safety net' that can cushion rural households during periods of economic hardship. It also finds that forests provide resources and a source of income for both rich and poor people, although they provide the most benefit to the poor. The study recommends that forest conservation policies need to take into account the important role that forests play in poverty reduction. It suggests that there should be a balanced approach to forest conservation and management – one in which the needs of the poor are taken into account and low-income households are not marginalized.



The study is the work of Jane Kabubo-Mariara, a Senior Lecturer at the School of Economics of the University of Nairobi. Her study looks at the impact that forests have on the livelihoods of forest communities in the Dundori and Bahati forests. These forests are located in the Nakuru district of the Rift Valley province of Kenya. The study looks specifically at the country's Shamba system of forest cultivation in which farmers tend young plantation trees as they produce food crops. The aim of the study is to provide much-needed information on the role that forests can play in poverty reduction and so help shape forestry conservation policy in the country. 🌍

A summary of CEEPA Discussion Paper No. 41: 'Forest Dependence And Household Welfare: Empirical Evidence From Kenya', by Jane Kabubo-Mariara (Ph.D), Senior Lecturer, School of Economics, University of Nairobi.

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Report Summary

Forest lands are of vital importance to the livelihoods of a vast number of people in many African countries. In particular, forest resources can contribute significantly to poverty reduction by providing useful products and additional income for rural people. However, the link between forests and poverty reduction has not been investigated in any detail in Kenya. To fill this information gap and help shape forestry conservation policy in the country, a new CEEPA study explores the role of the country's forests in household welfare. It looks specifically at the country's Shamba system of forest cultivation in the Nakuru district of the Rift Valley province.

The study is the work of Jane Kabubo-Mariara, a Senior Lecturer at the School of Economics of the University of Nairobi. Her study underlines the general consensus that forests can play an important role as an economic 'safety net' that can cushion households during periods of hardship. It also finds that forests in the study area provide resources and a source of income for both rich and poor people, although they provide the most benefit to the poor. The study recommends that forest conservation policies need to take into account the important role that forests play in poverty reduction. It suggests that there should be a balanced approach to forest conservation and management – one in which the needs of the poor are taken into account and low-income households are not marginalized.

Focusing on Forests

Although the importance of forests in the livelihoods of the poor is widely understood, environmental and economic studies in Kenya have focused on the impact of land degradation and household welfare, and have not looked in detail at the role of forests in people's livelihoods. This issue is, however, very important as the economic use of forests is currently contentious in Kenya. The country's recent Forest Bill says that people who are part of forest associations will be given user rights to collect both timber and non-timber forest products. However, conservationists are seriously contesting such community action on the grounds that it will have adverse environmental consequences.

To help contribute to this on-going conservation and development debate, Kabubo-Mariara's study looks at the impact that forests have on the livelihoods of two categories of people. Firstly, non-resident cultivators (NRC), who depend directly on crop cultivation in forests for their livelihoods; and secondly, other households that live next to forests but who do not cultivate crops in them. These types of people are commonly referred to as forest adjacent communities (FAC) and are likely to depend on forests for timber and non-timber products.

The study looks at how dependent these two types of people are on the forest for their livelihoods and how this is linked to their socio-economic status – in other words, the study assesses whether poor people depend on forests more than rich people. Kabubo-Mariara also investigates how much income people get from the forests they use. She also looks at how factors such as land ownership and forest use rights impact on people's level of poverty.

Investigating the Shamba System

This study is based on information gathered from forest communities in the Dundori and Bahati forests located in the Nakuru district of the Rift Valley province of Kenya. Dundori forest covers approximately 3845 hectares, of which 51% is categorized as 'productive areas' where trees can be planted. Bahati forest covers about 6,957 hectares of land and was only gazetted for NRC use in 2004. About 47% of the land is productive plantation, while 49% is protected. In both these areas communities practice food crop farming through the Shamba system. This is a method of establishing forest plantations in which farmers tend young plantation trees as they produce food crops.

Everyone Benefits from Forests

Kabubo-Mariara finds that forests play an important role in household welfare and poverty reduction. Both richer and the poorer households are found to depend on forests to a certain degree: Households in the lowest income group derive about 20% of their income from forest crop farming and collection activities, while households in the middle and upper income groups earn about 16% and 12% of their income from forests respectively.

People who farm in the forest gain the largest share of their income from forest crops and it is clear that registered forest users with forest plots are better off than registered groups that do not have plots. However, households that do not currently cultivate land in the forest do derive a reasonable share of their income by collecting forest products. This underlines the fact that forests can play a significant poverty reduction role.

The poverty reduction role of forests is also highlighted by the contribution they make to the diversification of household income sources. It is clear that households adopt a number of specialized forest strategies to augment their livelihoods; these include forest grazing, forest crop farming and forest gathering activities.

The most important resource collected from forests is construction material. This constitutes about 80% of the total income that people derive from the forests. Fuel and fodder are the next most important resources that people extract from the forests they use. In addition, 45% of all households graze animals in the forests at highly subsidized rates. For the whole sample, forest crop farming contributes about 10% of total income; while forest collection contributes 7%.

Table 5: Household dependence on forest product by forest user group

	Not registered	Registered without plot	Registered with plot	All groups	ANOVA test (F)
Value of Forest products collected (Kenya Shillings)					
Forest product:					
Value of fuel	492 (2613)	300 (168)	1068 (5268)	608 (3325)	5.26*
Value of fodder	115 (296)	44 (103)	1108 (7112)	351 (3560)	2.24***
Value of construction material	1317 (6066)	4038 (15216)	10332 (43284)	3940 (23003)	4.05*
Value of other forest products	45 (272)	17 (63)	100 (379)	55 (286)	2.07*
Total value of forest products	1969 (7762)	4399 (15269)	12608 (50075)	4954 (26553)	4.26*
Participation of households in forest activities (proportion)					
Forest grazing	0.16 (0.37)	0.32 (0.47)	0.53 (0.50)	0.28 (0.45)	17.79*
Forest collection	0.56 (0.50)	0.98 (0.16)	0.96 (0.20)	0.72 (0.41)	33.55*
Sample size	178	41	71	290	

*,*** significant at 1%, 10%; Standard deviations in parenthesis

“ There should be a balanced approach to forest conservation and management – one in which the needs of the poor are taken into account ”

Forests Play a Key Role in Poverty Reduction

In terms of the factors that influence people's use of forests, it is clear that membership of village institutions and forest user groups enhances the level of forest resource extraction. Membership in such groups also enhances a household's dependence on forest products; it also positively influences people's participation in forest activities and increases their willingness to participate in collective forest management work.

Other factors that influence people's use and dependence on forests include private endowments of land and livestock, as well as land tenure security. It is clear that households that do not own much non-forest land are most inclined to use forest plots for cultivation. It is also clear that when people's non-forest land-holdings reach a certain threshold size, then their reliance on forests declines. Specific characteristics such as the age and education level of household heads and household size are also important determinants of forest resource dependence.

Overall, it is clear that both the poor and the less poor derive a substantial share of their income from forest activities and that forests are not necessarily poverty traps for rural households. It is also clear that households engage in forest activities more to cater for temporary shortfalls in income than to deal with long-term financial problems. This points to the conclusion that forests act as safety nets that can cushion households during periods of hardship.


It should be noted that the contribution of forests to household income in Kenya is lower than in many other developing countries. This is probably down to the fact that there are very tight controls over the use of forest resources in Kenya – in light of this fact, the contribution of forests to people's livelihoods in Kenya is actually more significant than it might seem.

Linking Poverty Reduction and Forest Conservation

The results of this paper indicate that forests are an economic safety net for many rural communities. The results also suggest that forests play an important role as an income and resource gap-filler and therefore play a vital role in poverty reduction.

Since environmental policy is often driven by concerns about forest degradation, from both government and conservationists, there is a definite need to take on board the needs of local communities when forest conservation is discussed. Policy should strike a balance between forest extraction by local communities and the need to protect forests from degradation. In particular, it should be recognized that landless forest squatters derive a substantial part of their income from forests and that they would therefore lose their livelihoods if a total ban on forest cultivation is imposed.

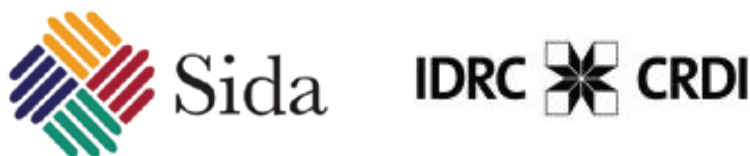
The study also shows that many different types of households depend on forests. This raises the issue of equity in the distribution of any benefits from community forests. It is therefore vital that policy makers should take a balanced approach to forest management that will ensure that the poor are not marginalized and can access the environmental resources that they need to survive.

One further point deserves serious consideration: The study suggests that the Kenyan government already derives substantial benefits from the work non-resident cultivators do to manage and re-plant forest areas through the Shamba system. This indicates that more NRC projects should be set up in deforested areas to provide a livelihood for landless communities. This offers the possibility of an important 'win-win', as such action would encourage more rural people to participate in forest conservation and the establishment of plantations. In this way, thousands of hectares of bare forests would be re-afforested at little cost to the government. At the same time poor forest communities would be provided with a livelihood. 

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