

The Role of Community Forest Associations in Participatory Management of Ontulili and Ngare Ndare Forests in North Central Kenya

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Abstract:

Forests enhance conservation of the environment, biodiversity, water, and soil resources while significantly contributing to the livelihoods of forest adjacent communities. Under the Kenya's new Forest Act (2005), community participation is provided for through formation of Community Forest Associations (CFAs). Past studies have shown how major CFAs in Kenya operate and the challenges they face. However, factors determining household decision to join CFA and the CFAs' capacities to meet PFM objectives have not been studied adequately in Kenya. Hence, this study focused on Ontukigo and Ngare Ndare CFAs involved in participatory management of 'Outulili and Ngare Ndare forests in North Central Kenya. The objectives were: (i) identify household factors associated with decision to participate in CFAs; (ii) identify the differences between CFA and Non CFA members in their participation in forest conservation activities; (iii) assess the relationship between the level of participation of CFA members in PFM and their perceived benefits; (iv) assess community perceptions on contribution of PFM to improvement of livelihoods of CFA members and (v) assess community perceptions on contribution of PFM to improvement of CFA members' livelihoods. The households were stratified on the basis of CFA membership. Semi structured questionnaires were then administered to randomly selected 80 CFA and 80 Non CFA members. Participatory Rural Appraisal tools, namely historical timelines, focused group discussions and community wealth characterization were used to collect qualitative data for precise description of the quantitative data. Chi-square tests and correlations were computed using SPSS to test the existence of significant relationships between dependent and independent variables, their direction and strength. A t-test was used to test significance of the difference, between the means of various variables of CFA and Non CFA. Household factors-influencing CFA membership included household size ($t=2.065$, $P=0.05$); age of community members ($t=2.408$, $P=0.01$); and livestock owned ($t=2.804$, $P=0.01$). Participation in forest conservation activities such as forest patrol, fire control, tree nurseries and tree planting was positively influenced by CFA membership ($\chi^2 = 7.83$, $P=0.05$). The level of participation of CFA members in PFM activities was positively and significantly influenced by the level of perceived PFM benefits ($\chi^2 = 38.73$, $P=0.05$); range of farm size ($\chi^2=12.72$, $P=0.05$); and nature of household headship ($\chi^2 =29.99$, $P=0.001$). Access to training in forest management and planting of trees on farms was influenced by CFA membership positively. Increase in forest cover was associated with CFA participation in PFM. All community members perceived that the livelihood of CFA members had improved after PFM due to; knowledge and awareness gained from PFM training, benefits from forest products, financial gains from PELIS, tree planting and sale of tree seedlings. Improvement in economic wellbeing of CFA members was significantly influenced by their participation in PFM ($\chi^2=80.00$, $P=0.001$) enhancing access to firewood, water, fodder and participation in various PFM income generating activities. Access to forest products was significantly influenced by CFA membership ($\chi^2=15.88$, $P=0.001$). Changes proposed for improvement of PFM included; imposition of stiffer penalties to forest offenders, increased benefits to CFA members, assistance to the communities living adjacent to the forests and empowerment of CFAs in forest management. Modalities of benefit sharing between Kenya Forest Service and the CFA members need to be

streamlined to enhance CFA participation in PFM. There is need for intensive analysis of the environmental and economic impacts of PELIS and firewood ' collection from the government forest.