

Economic value of Mt. Elgon forest ecosystem services;
A case of Bududa and Kapchorwa districts, Uganda

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ABSTRACT

The study on the economic valuation of ecosystem services provided by Mt. Elgon forest ecosystem focused on Bududa and Kapchorwa districts' forest adjacent communities. The study population was drawn from parishes neighboring the Mt. Elgon National Park forest ecosystem in both Bududa and Kapchorwa district. The overall objective was to assess the economic value of ecosystem services provided by Mt. Elgon forest to the adjacent communities. The specific objectives included to characterise the ecosystem goods and services derived by the communities, to find out the monetary values attached to the ecosystem goods and services and finally to assess the determinants of people's willingness to pay for the ecosystem services. The study was descriptive in design and followed a mixed research design to approach the problem both in-depth and in general. Primary data was mainly used and secondary data sourced from the existing literature. Data was collected using questionnaires which were distributed to the 135 randomly selected households in both Bududa and Kapchorwa districts. Market prices and contingent Valuation method (WTP) were used to find out the attached economic value on ecosystem goods and services.

In data management and analysis, Ms Excel and STATA MP 14 statistical packages were used to generate frequency distribution tables come up with other statistical results and conclusions. The results indicated that Mt. Elgon National Park forest adjacent communities were vulnerable and heavily dependent on the ecosystems for their livelihood and economic development. They derived both provisioning services and other indirect use values; regulating and cultural services from the forest ecosystem. The annual estimated total economic value attached was 642,160,800 UGX and 137,886,000 UGX for both in Bududa and Kapchorwa respectively. Communities in Bududa study area valued the forest ecosystem more than those in Kapchorwa. However, it was observed that the values attached were relatively low this could be attributed to the low incomes and restricted access by UWA. Some significant relationships between people's willingness to pay for ecosystem services and distances to the forest, and economic activities in Bududa study area were realized. Probit tests revealed that respondent's socio-economic characteristics such as household size, education level, household income and forest access had no significant influence in the respondent's willingness to pay for the ecosystem services provision within Kapchorwa district. Factors such as distance to the forest show significant relationship with the willingness to pay for the ecosystem services in Kapchorwa district. It was recommended local communities be sensitized on forest ecosystems importance. Proper value estimates could be reached if the people understood the ecological, social and economic importance of this ecosystem. Promotion of livelihood projects like bee keeping, mushroom growing, establishment of woodlots, and agro- forestry systems is needed to reduce pressures on the existing forests among others. Collaborative forest management and community based natural resource management should also be embraced so that the communities get a sense of ownership of the resource for continued supply of the services.

Key words: *forest ecosystem services, willingness to pay, value*