



Examining land use change and cooking fuel-use in Uganda: implications and potential win-win scenarios for policy and carbon financing

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Uganda is one of the world's most biodiverse countries, yet also one of the poorest. Human dependence on natural resources, especially from forests, is most pronounced in developing countries such as Uganda, where many people live in poverty and rely on fuel wood for cooking. These demands often compete with conservation efforts aimed at protecting forests and biodiversity. An understanding of trends in forest condition and local community use of forests is necessary to explore the implications of changing environmental conditions on the sustainability of Uganda's forests and forest-related socioeconomic activities. A human-environment framework is applied to this research by comparing environmental layers derived from remotely sensed imagery with socioeconomic data acquired from household surveys. Statistical modeling was used to explain the relationship between household characteristics (e.g., fuel use) and environmental characteristics (e.g., land cover change) and to quantify the role of spatial arrangement or pattern in understanding human-environment relationships (e.g., access and distance). The findings show that distance from protected forests is related to changes in household fuel type. For example, increases in charcoal as the primary cooking fuel is observed in households a closer distance to protected forests. This change is likely due to access to forest resources. The results of this study could inform policies aimed at protecting forests as well as protecting the interests of people in proximity to protected forests.