Food security and wildlife conflict in community conservation areas

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Issue

Conflicts with wildlife result in significant costs to households living near tropical parks and reserves\(^1\). Farmers and livestock keepers lose crops and livestock and must devote time to guarding fields and herds. For smallholder households, these costs negatively impact livelihoods and can result in food insecurity. In addition, conflicts motivate retaliation against wildlife, such as the poisoning or hunting of suspected individuals or species.

Wildlife conflict, and its consequences for both humans and wildlife, is one among many challenges facing local communities and protected biodiversity in Africa. A common strategy applied to these linked challenges is community-based conservation (CBC)\(^2\). In order to reduce the costs experienced by households near parks, for example from wildlife conflict or restricted access to natural resources, the rights to manage and profit from local resources are given to communities. The CBC model makes two important assumptions: first, that central governments effectively transfer rights to communities, and, second, that communities benefit from holding these rights themselves. These assumptions usually involve communities managing resources for commercial use, such as leasing blocks of forest for timber extraction or promoting wildlife tourism\(^3\).

CBC has been a central piece of conservation strategy since the 1990s\(^2\). However, while costs of living near wildlife and conservation areas remain, there are few clear examples of successful CBC programs to date\(^2,4\).

Policy Implications

Tanzania faces similar challenges of rural poverty and biodiversity loss as many nations in sub-Saharan Africa\(^5\). Yet, Tanzania is unique in ways that make it an ideal test case for studying CBC policy\(^3\). The country has unparalleled biodiversity value, which, together with a significant safari tourism economy, means that there is revenue potential for local communities. In addition, concrete steps have been taken by the Tanzanian government to formally transfer certain rights over wildlife to community control (although problems persist over rights and revenue sharing). Finally, there is substantial interest and engagement from donors supporting CBC programs\(^3\).

Despite decades of decentralized natural resource policy and donor support of CBC, there exists scant evidence explaining why programs succeed or fail\(^2\).

Research Findings

Using household data from multiple CBC sites across Tanzania’s northern wildlife tourist circuit, we evaluated the following two questions:

1. Is there an association between household food security and CBC project participation?
2. Can CBC projects lessen the negative effects of...
losing livestock to predators? These questions were evaluated through a controlled experimental design and the estimation of statistical models.

Wildlife management areas (WMAs) of northern Tanzania. Study included data from 40 communities and 2,499 rural households. Experimental design tested the effects of four WMAs (Burunge, Enduimet, Makame, and Makao) on household food security outcomes.

Community-based conservation projects do not benefit participating households on average. There is substantial variation in CBC project benefit across the region, with some households faring better, and others worse, than the control group. However, CBC projects effectively reduce the negative impacts felt by households when they lose livestock to predators. These outcomes are measured in terms of household food security, which is an accurate proxy for overall well-being.

The CBC policy in Tanzania is not a cure-all for the costs experienced by farmers and livestock keepers living close to parks, including frequent conflicts with wildlife. However, some CBC projects support greater food security. Generating tourism revenue is likely a precursor to project success, but there are additional important factors. This research suggests that CBC projects support improved management capacity within participating villages, along with greater accountability within village leadership. Gains in governance at the village level may be an indirect outcome of the substantial donor support that is typically directed to CBC project establishment and maintenance.

The Government of Tanzania and conservation organization partners should continue to support the national CBC program. Continued support must acknowledge the variation in individual project success. Greater resources must be directed towards project evaluation, with attention to the mechanisms that lead to both positive and negative outcomes.

Further Reading

This brief is based on the study, Household livelihoods and conflict with wildlife in community-based conservation areas across northern Tanzania, published in the journal *Oryx*.


