



Tropentag, October 6-8, 2009, Hamburg

“Biophysical and Socio-economic Frame Conditions  
for the Sustainable Management  
of Natural Resources”

## Contribution Behaviour Towards Collective Management of Common Pool Forest Resources in Western Kenya

JULIUS MAITHYA, TOBIAS WÜNSCHER

*University of Bonn, Center for Development Research (ZEF), Germany*

### Abstract

Kenya has a forest cover of 1.7% while deforestation and degradation still continues. Unless this trend is slowed, livelihood sources of many of the poor communities surrounding the forests will be lost and greenhouse gas emissions from forest loss will contribute to global warming. One of the commonly cited reasons for the continued deforestation is the lack of involvement of the local communities by the central government in managing forest resources adjacent to them. To address this, the government of Kenya revised and enacted a new forestry policy in 2007 which provides for the involvement of adjacent communities through collaborative forest management (CFM). Yet, for CFM to be successful, community members need to behave cooperatively. Literature indicates that this is not always the case as communities are not composed of homogeneous groups who act in the interest of the larger community. To examine the level of cooperative behaviour and institutions to control un-cooperative behaviour, we conducted economic experiments using randomly selected household heads from villages surrounding Kakamega forest in western Kenya. In the experiments, each person was endowed with 10 money units (MUs) from which they were expected to contribute any amount ranging from 10 (everything) to 0 (nothing) towards a group conservation kitty for financing conservation activities of their hypothetical communally owned forest resource. The experiment was designed so that pay-offs (each MU had a value of 0.01 Euros) were highest for individuals if all participants contributed everything to the kitty. Twelve rounds of the game were played with two scenarios: with and without sanctioning rules. There was a significant difference ( $p = 0.05$ ) between mean overall contributions without sanctioning rules (5.13 MUs) and with sanctioning rules (7.32 MUs). This underscores the importance of sanctioning rules and their enforcement if high cooperative levels are to be expected under social dilemma situations like voluntary conservation of a common pool resource. The results have important policy implications for the design of CFM projects in Kenya.

**Keywords:** Common pool resource, deforestation, degradation, economic experiments