

Tropentag, October 9-11, 2007, Witzenhausen

"Utilisation of diversity in land use systems: Sustainable and organic approaches to meet human needs"

## Integration of Smallholder Farmers in International CO<sub>2</sub>-Markets by Applying Agroforestry Practices in Western Kenya

Johannes Rupp

Humboldt-Universität zu Berlin, Institute for Economic and Social Sciences of Land Use, Chair of Resource Economics, Germany

## Abstract

Rural areas in Western Kenya are beside the high population density in particular characterised by badly degraded soil and vegetation patterns, caused by conventional cropping practices, overgrazing as well as an increased number of unpredictable rainfalls. As a result these conditions lead to extreme poverty among rural households such as smallholder farmers. In order to improve rural livelihoods as well as enhance biodiversity and mitigate climate change, agroforestry practices are on the way to find further application in the region around Lake Victoria.

As part of a master research, carried out by the Humboldt-University, Berlin, in cooperation with the World Agroforestry Centre (ICRAF), institutional settings of smallholder farmers will be analysed in order to meet international  $CO_2$ -markets like the Clean-Development-Mechanism (CDM) as an instrument of the Kyoto-Protocol and Voluntary Markets as the Chicago Climate Stock Exchange. Targeting international  $CO_2$ -markets by applying agroforestry practices in form of diversified land use systems are currently still neglected.

The emphasis of this research - carried out in spring/ summer 2007 - is based on two catchment areas in Western Kenya, the Nyando and Yala river basins. These two areas have different organisational and cultural structures among smallholder farmers, which include individual and common activities as well as participation of women and youth. In order to target the challenges demanded by requirements of international  $CO_2$ -markets, driving and limiting factors affecting the integration of smallholder farmers will be elaborated by focusing on local-level institutions. Group interviews as well as in-depth interviews with key informants will target the following points: i) mobilisation and empowerment of smallholder farmers by prioritising tree planting activities, ii) general perception of smallholders towards carbon markets, including the role of by-laws, iii) as well as distribution of project benefits in terms of individual and common expectations.

Having in mind, the present difficult status of projects integrating smallholder farmers in international  $CO_2$ -markets, the generated outputs of this research will make it easier to discuss future issues on project design and implementation. This is in particular of interest in order to achieve one of the basic objectives of international  $CO_2$ -markets, sustainable development of developing countries.

**Keywords:** Agroforestry, international CO<sub>2</sub>-markets, smallholders, sustain and improved livelihood, western Kenya

Contact Address: Johannes Rupp, Humboldt-Universität zu Berlin, Institute for Economic and Social Sciences of Land Use, Chair of Resource Economics, Cantianstrasse 18, 10437 Berlin, Germany, e-mail: john-rupp@gmx.net