

## Marketing Opportunities and Constraints in the East Usambaras, Tanzania

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Creating effective strategies to alleviate poverty and conserve biodiversity in tropical countries has become a critical issue in economic development efforts. It is difficult to establish protected areas to manage resources at landscape level and greater attention has focused on how to conserve remaining biodiversity while supporting rural development needs. The East Usambaras, located in northeast Tanzania, are similar to many tropical regions that contain unique ecosystems. The mountains are characterized by a mosaic of land use patterns, including agriculture and montane rainforests that support some of the highest species biodiversity in the world.

Within this setting, smallholder subsistence farmers grow many common food crops, including maize and cassava. Additionally, in the uplands, significant cash crops include spices that are grown in agroforestry systems. Native trees create shade for growing the “queen of spices”—cardamom. Cardamom is intensely aromatic and used in curries; in European countries the spice is used to flavor sweet pastries. For farmers in the East Usambaras cardamom thus holds potential as a high value export crop. In fact, the government promoted cardamom as a market strategy to alleviate poverty by producing for high value niche markets. My research has investigated cardamom cultivation and other land issues that are paramount to understanding how to address conservation priorities in the area: farmer’s land use practices and markets.

Cardamom production has been criticized as a leading cause of deforestation. Although it is grown under native trees in agroforestry systems, production is estimated to last only 13



years. At this point, yields decline and so do farmers’ incomes. Farmers then convert their agroforestry systems to grow crops that enjoy full sunlight, such as food crops. But in so doing, the biodiversity value of their farm is lost: native trees are removed. In 2009 I developed profitability models for farmers’ land use practices. In short, conversion is lucrative and farmers incur high opportunity costs if they do not convert. I returned this summer to examine markets for the crops in these systems. My research assistant and I travelled by motorbike and camped in villages to interview farmers and intermediaries in rural and urban areas. We used a value chain analysis approach, which describes the full range of activities from production to final consumers. Our research revealed that there are significant constraints to farmers getting their crops into high value export markets, including weak institutions and low capital.

Identifying market inefficiencies is useful to develop strategies to improve market based approaches that generate incentives to conserve agroforestry systems. For example, organic certification emphasizes quality standards and encourages sustainable agricultural practices.

Conducting research in this corner of the world has taken me off the beaten track to an area I may not have otherwise visited. My field experiences have been adventurous and taught me many lessons, especially the value of communication. My ability to communicate in Swahili because of the FLAS fellowship has helped tremendously in facilitating professional relationships, and more importantly, getting to know the farmers with whom I work.

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