## Community-based monitoring of natural resource use and forest quality in montane forests and miombo woodlands of Tanzania

ELMER TOPP-JØRGENSEN<sup>1</sup>,\*, MICHAEL K. POULSEN<sup>1</sup>, JENS FRIIS LUND<sup>2</sup> and JOHN F. MASSAO<sup>3</sup>

INORDECO (Nordic Agency for Development and Ecology), Skindergade 23, DK-1159 Copenhagen K, Denmark

2Centre for Forest, Landscape and Planning, Royal Veterinary and Agricultural University, Rolighedsvej 23, DK-1958 Frederiksberg C, Denmark

3District Lands, Natural Resources and Environment Office, P.O. Box 148, Iringa, Tanzania \*Author for correspondence (e-mail: nordeco@nordeco.dk; fax: +4533919032)

**Abstract.** A community-based monitoring system that focuses on natural resource use and forest quality in montane evergreen forest and miombo woodland areas was developed and implemented in 23 villages in 2002 as part of a participatory forest management regime in Iringa District, Tanzania. The scheme was developed to suit the needs and capacities of locally-elected natural resource committees managing and monitoring natural forests. Rather than measuring biodiversity, the monitoring is focused on resource extraction and disturbance. High levels of commitment to the monitoring were played by village level managers, and the preliminary feed-back indicates that the monitoring scheme provides them with the relevant information needed to suggest appropriate management interventions. While external support has been essential to cover development costs, natural resource revenue generated at village level can provide most of the running costs. Once developed, the scheme can, however, be transferred to similar areas at significantly lower costs that can be met by Tanzanian District budgets. Natural resource revenue generated from montane forests is generally much lower than in woodland areas due to restrictions on resource extraction imposed as a consequence of national and international interests. Opportunities to provide economic incentives for montane forest managers through direct utilisation of the resource are limited and it remains to be seen whether other non-economic incentives can sustain long term commitment in these biodiversity rich areas. Findings indicate that the key elements of this local resource utilisation monitoring scheme are simplicity, incentive mechanisms, transparency and accountability, and autonomy for local managers. However, the methods may not provide sufficient data on changes in biodiversity values in the high value forests and may need to be augmented by conventional monitoring by scientists funded by national or international institutions. Elements of the scheme are now being institutionalised within the forestry sector in Tanzania.

One contribution of 16 to a Special Issue of *Biodiversity and Conservation* 'Monitoring matters: examining the potential of locally-based approaches'.

Issue: Volume 14, Number 11

Date: October 2005 Pages: 2653 - 2677