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> Even Bergseng, Grethe Delbeck, Hans Fredrik Hoen (eds.) Ås

## Assessing effects of participatory forest management on forest conservation; A case of village managed miombo woodland forest in Iringa, Tanzania

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Participatory forest management (PFM) in Tanzania has the triple objective of (i) conserving forest resources, (ii) improving rural economic development and (iii) promoting good governance, including democratic decision-making, at local level. This paper is predominantly concerned with assessing the effects of PFM on forest conservation in two village forest reserves, Mfyome and Kiwele in Iringa district, Tanzania. The approach has been to estimate whether the harvest of woody biomass is within the reproductive capacity of the forest. An inventory of the growing stock through temporary sample plots and literature-based estimates of the annual increment is used to estimate forest growth and village records, household interviews as well as an inventory of charcoal production sites and interviews with charcoal producers are used to estimate the annual outtake. Results suggest that local management of the forests has, in fact, resulted in harvest levels that are within the estimated growth. Whether this includes conserving a \*desirable\* species composition in terms of preferred timber charcoal as well as firewood species is, however, uncertain. Yet, investigations of management rules and their enforcement, which include protection of timber species from being cut for charcoal and firewood production, suggest that village-level managers are to a large extent capable of devising and enforcing silviculturally sound management rules. Accordingly, the study supports the hypothesis that securing local ownership to local forest resources, products and revenues will promote conservation of forests that used to be, de facto, open access resources irrespective of their official status. However, longitudinal monitoring is needed to establish more firm conclusions about the effects of PFM on forest conservation.

Keywords: Participatory forest management, forest conservation, Tanzania