

With or Without Community Participation: A Lesson from Joint Forest Management in the Eastern Arc Mountains, Tanzania

¹Sangeda Anthony Zozimus*, ²Abdallah Jumanne Moshi, ³Kajembe George, ³Luoga Emmanuel and ⁴Hofstad Ole

¹Department of Animal Science and Production, Sokoine University of Agriculture,
P.O. Box 3004, Morogoro, Tanzania.

²Department of Forest Economics, Sokoine University of Agriculture,
P.O. Box 3012, Morogoro, Tanzania.

³Department of Forest Mensuration and Management, Sokoine University of Agriculture,
P.O. Box 3013, Morogoro, Tanzania.

⁴Department of Ecology and Natural Resource Management, Norwegian University of Life Sciences,
P.O. Box 5003, NO-1432 Aas, Norway.

*Corresponding Author: E-mail: sangedaaz@gmail.com

Abstract

Participation is now a dominant conservation narrative in Tanzania as the government is advocating partnership with local communities through Joint Forest Management (JFM). However, conservationists claim that participation does not lead to sustainable conservation and that there is a gap between rhetoric and practice. We assessed stocking and disturbance levels in forests with JFM and compared them with those without. The comparison was done for selected forests within Eastern Arc Mountains in Tanzania with similar ecological characteristics. Systematic forest inventory was employed in which transects (900 m long) were sampled throughout four forests. A total of 152 circular plots (0.07 ha) with two smaller sub-plots were sampled. Stem diameter at breast height (DBH) for all trees, height and basal diameter of three sample trees in a plot, were recorded. Basal diameters of cut tree stumps were measured to quantify the removals. Stocking was higher in forests with JFM than forests without for both montane and lowland forests. The difference was statistically significant across all the vegetation types except in woodland ($p= 0.9049$). However, forest reserves under JFM were more disturbed than those without. Even though, the disturbances were sustainable and ecologically good as they were below the mean annual increment and therefore considered beneficial to the forest in terms of stimulating regeneration of the harvested tree species. The most harvested tree species in montane forest was *Ocotea usambarensis* while in the lowland forests were *Cedrela odorata*, *Milicia excelsa*, *Combretum molle* and *Albizia petersiana*. Lack of incentives, benefit sharing mechanisms and market demands led to weak enforcement of set regulations. As a result, JFM have failed to stop illegal harvesting and these forests have become focal points for disturbances. Therefore, there is a need for taking corrective measures before scaling up of JFM in other parts of the country.

Keywords: Participation, Stocking, Forest disturbance, Kimboza forest reserve, Tanzania