

Do households' perception on tree planting for wood energy production in the developing countries matter?

Yusuph J. Kulindwa^{a*1}, Erik O. Ahlgren^b, Dr. Lennart Bångens^b, Aloyce Hepelwa^c

^aA Collaborative Programme between the University of Dar es Salaam, Tanzania, and Chalmers University of Technology, Gothenburg, Sweden

^bDepartment of Energy and Environment, Chalmers University of Technology
Gothenburg, Sweden

^cDepartment of Economics, University of Dar es Salaam, Tanzania

Abstract

While forest remains a primary source of energy for 94% (9,276,997) of Tanzanian households, the forest cover is declining at an increasing rate of 1.16% (403, 000 ha) per-year with an annual recovery rate of only 0.32% (109, 000 ha). The Tanzanian government have introduced a tree planting campaign, thereby reducing pressure on the natural forests driven by wood energy scarcity. However, tree planting campaigns appear to have not contributed significantly to this energy source. The rationale behind the campaigns was to raise the households' motives towards tree planting and wood energy production. We analyse the causal effect between households' tree planting and the households' perception of tree planting activities which was expected to raise. The analysis builds on a theoretical framework, and the prediction strategy that integrates the household's tree planting perception into the economic policy instrument model. We employ Tobit and Heckman models to account for heterogeneity and bias selection. The results revealed that the forest policy related factor that favours the rights/freedom to harvest trees from farms, is the one that matters. This policy factor has a positive significant effect on households' tree planting perception. The results further suggest that there may not be a correlation between households' tree planting for wood energy as was expected in the areas studied. We conclude that tree planting campaigns will not have a significant effect in the areas studied unless the policy for commercial awareness is imparted to households and establish a coordinated business by tree planting programmes and institutions.

*1Corresponding author

E-mail address: yusuphkulindwaj@yahoo.com, usuph@chalmers.se