

## **ECOLOGICAL INEQUALITIES, POVERTY AND FOREST INCOME: A CASE STUDY FROM BURKINA FASO**

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Abstract:

Forest is an indispensable source of earning for the forest fringe households which extract wood (timber and wood-energy) and provide non-timber forest products, this last activity contributing significantly to a rural household's livelihood in the African semi-arid regions. In those areas, the use of wood as energy by households is a common practice which often can lead to an obvious deterioration of forests. In Burkina Faso for instance, wood energy has contributed to the national energy balance of a mean value of 75% in 2008; this contribution is higher for households' energy consumption that reached the proportion de 94,79% for the same year. For the same reasons, forest can offer a great potential for poverty alleviation and reduction of income inequality among forest dependent poor households.

The aim of this paper is to put an emphasis on the relationship between the supply of forest products by the local populations and the sustainability of forests on the long run. Within this context, natural elements (access to natural resources, rainfall...) and social elements (statutes, standards of living, poverty...) have to be connected together. A first step of our analysis is focused on the behavior of forestry households in managed forest areas and on the key determinants of households' well-being (especially in terms of poverty). A second step is conducted with the study of the interactions between an environmental variable (rainfall) and the location of forest areas in order to shed light on the determinants of household poverty in these forest areas.

Taking into account data combining in particular the location of households (rural or urban), standards of living of different groups (lumberjacks, carters...), the rules in the management of the forest, as well as the organization of the villages with ecological variables such as rainfall may provide a first step for modelling some relevant interactions between human activities and ecological systems in this respect. On this basis, we propose to characterize the ecological inequalities associated with the management of forest in a developing country namely Burkina Faso.

In this perspective, we also focus on some processes through which those inequalities emerge: should they be sustained by an unequal distribution of the services provided by forests within the population, or by the deterioration of the forests because of specific cultural practices? Our study is based on data related to 300 lumberjacks located in different areas where the forests are managed. In particular we use the different forest and agro-climatic potentialities between these managed forests to explain the peasant's and/or lumberjack's income difference in these areas.

The main questions that can find answers in this study are the following: Is the access to forest does improve household economic position (poor, very poor or rich) in forest villages? Does household income from forestry contribute to reducing inequalities in managed forests? Does rainfall in forest villages affect the forestry income? Does rainfall affect the poverty level of woodcutters?

These questions led to examine more closely the role and the incidence of forest revenues on household poverty and on reducing inequality among loggers in the managed forest areas. Concerning the possible relationship between the environmental variable "rainfall" and the forest-source income as well as with the Foster-Greer-Thorbecke poverty indicators for local residents managed forests, some preliminary results show that there is a positive correlation between rainfall and both forest income levels and agricultural revenues. In other words, high levels of rainfall contribute to improve incomes of loggers in the villages bordering the loggers.