Tropentag, September 15-17, 2021, hybrid conference

"Towards shifting paradigms in agriculture
for a healthy and sustainable future"

Priority Tree Species for Forest Restoration, Enhancing Livelihoods and Ecosystem Services in Ethiopia

Déglise Guillaume[1], Giuliani Alessandra[2], Vinceti Barbara[3]

[1]*Bern University of Applied Sciences (BFH), School of Agricultural, Forest and Food Sciences (HAFL), Switzerland*
[2]*Bern University of Applied Sciences (BFH), School of Agricultural, Forest and Food Sciences (HAFL),*
[3]*Bioversity International, Tree Biodiversity for Resilient Landscapes , Italy*

Abstract

The few remnants and highly degraded Ethiopian forests cannot adequately provide ecosystems services as well as livelihood security to rural Ethiopian households. This is why the Alliance of Bioversity and CIAT, in collaboration with local communities and institutional partners launched the project Trees for Needs, aiming at improving livelihoods of rural households and ecosystems services by restoring forests in Eastern Ethiopia.

This study provides an extensive literature review of the current state of knowledge about reforestation practices in Ethiopia and a household survey targeting rural households in Oromia.

The literature review looks at the reforestation practices used in Ethiopia over the last 30 years, focusing more particularly on aspects such as community involvement, land tenure, tree species selection in reforestation projects.

The survey, performed in Eastern Ethiopia, Oromia, reaching 320 households in eight villages across four districts in the zones of Jimma and Illu Aba Bora, , enabled to identify the tree species most preferred by smallholders and to understand which traits are most favoured.

According to the literature, reforestation projects lack sufficient involvement of local communities. These tend to be included at a late stage in the decision-making processes, leading to a low willingness to participate in reforestation activities.

Moreover, land tenure issues are a major constraint. The State owns the land, including reforested and restored areas. By not granting long-term secure leases to tenants, the State hinders the willingness of smallholders to invest in reforestation.

Tree species selection for forest restoration depends on expected benefits and local conditions, therefore it varies between communities and agro-climatic zones, as the literature review and household survey confirmed. Results of the survey showed a preference for native species over exotics.

Considering both local environment and preferred characteristics, the most desired and suitable tree species for restoration appeared to be *Cordia africana*, Croton macrostachyus, Acacia spp. and Olea europea.

To better understand the potential of these species for restoration, more aspects should be investigated, specifically: the amount of natural regeneration of these species in farmers' plots, the availability of seed for planting, seed behaviour, farmers' capacity to handle seed and establish nurseries.

Contact Address: Déglise Guillaume, Bern University of Applied Sciences (BFH), School of Agricultural, Forest and Food Sciences (HAFL), Im Altried 1b, 8051 Zurich, Switzerland, e-mail: guillaume.deglise@gmail.com

Keywords: Ethiopia, Oromia, sustainable forest restoration, tree species selection, tree species uses