



Tropentag, September 14-16, 2022, hybrid conference

“Can agroecological farming feed the world?
Farmers’ and academia’s views”

Influence of land use and governance on natural resources in the Diana region, Madagascar

HAMY RAHARINAIVO¹, HARIFIDY RAKOTO RATSIMBA², STEFAN SIEBER^{3,1}, KATHARINA LÖHR^{1,3}

¹*Leibniz Centre for Agric. Landscape Res. (ZALF), Sustainable Land Use in Developing Countries (SusLAND), Germany*

²*Higher School of Agronomic Sciences (ESSA), Forestry and environment, Madagascar*

³*Humboldt-Universität zu Berlin, Thaeer-Institute of Agricultural and Horticultural Sciences, Germany*

Abstract

The population living around protected areas benefits directly from the ecosystem services provided by natural resources. In a country with an agricultural vocation like Madagascar, about 80% of the population lives in rural areas and agricultural activities. In the western part of Madagascar, all protected areas are under pressure due to migratory and anthropogenic phenomena. The Irodo watershed has different types of agricultural vocations including crops (vegetables, tomatoes...), livestock (cattle, goats...), rice, food crops on Tanety (cassava, maize, groundnuts, etc.) and agroforestry/cash crops (cocoa, vanilla, litchi, bananas, etc.) They provide subsistence and income activities for the community living around the protected areas. The regulation and support services provided by the forest whose fertility and soil formation ensure the sustainability of the main activities of people. However, land use patterns and agricultural practices that characterize the region are often linked to the socio-economic characteristics of the population. Agricultural potentials are often determined by these land use patterns. As agricultural practices are still generally based on traditional methods that opt for slash-and-burn crops, the decrease in soil fertility leading to soil degradation induces a decrease in production and thus impacts on food security. There is therefore a link between governance, income from various agro-pastoral speculations, food security and increasing anthropogenic pressures on natural resources. By spatial modelling, natural forest losses can be determined in relation to the mode of land use and thus the mode of governance. This study on linking forest landscape restoration and governance is part of the Tropical Restoration Expansion for Ecosystem Services (TREES) project of Forest for Future (F4F) implemented by GIZ in Madagascar, Ethiopia and Togo.

Keywords: Food security, governance, land transformation, land use, soil fertility