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Farmers’ and academia’s views”

## Agroecology as solution to land degradation: vulnerability and resilience in far North region of Cameroon

HAMZA MOLUH NJOYA, KATHARINA LÖHR, CUSTODIO MATAVEL, SHIBIRE ESHETU, STEFAN SIEBER

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

### Abstract

In the context of sustainable development, agriculture occupies an important place since it significantly impact the natural resources. Particularly, it plays a key role in the development of the territories, and it meets one of the most fundamental human needs (nutritional role). Thereby, the sustainability of agriculture is a necessity for farmers and for biodiversity. However, producers face a changing climate that contributes to exacerbating poverty and social tensions. Thus, vulnerable farmers in the semi-arid zone of North Cameroon have implemented several practices and techniques to cope with land degradation. This study therefore identifies and assesses the various agro-ecological techniques implemented by vulnerable producers in response to land degradation within the council of Tokombéré, Cameroon. By means of a household survey 160 farm households interviews were conducted following a stratified random sampling technique and complemented with field observations. The analysis of the data reveals that the techniques implemented by farmers are different depending on farmer’s geographical location. In the mountainous region, farmers grow crops on the terrace and use soil and stone bunds simultaneously. On the other hand, farmers in the plains, generally use half-moon, the zai, cultivation on ridges and beds to cope with land degradation. Moreover, in the plains, stone bunds have also been installed. Use of human urine as a fertiliser has also been a new practice. The field observations reveal that the locker and ridges were the most effective techniques on the plains. The field observations also show that soils in the mountains are less degraded and more fertile than those located in the plains. It is concluded that the restoration techniques applied in the mountain are more likely to enhance resilience than those applied in the plain.

**Keywords:** Agroecology, climate change, land degradation, resilience, vulnerability