



Effect of Land Degradation on Farmers' Food Security and Poverty Status Nexus Livelihood Diversification in Nigeria

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Introduction

- The UN Convention to Combat Desertification, of which Nigeria is a signatory, recognizes land degradation as a global development & environment issue.
- The links between poverty and degraded land or the environment interconnected with rural livelihood diversification are influenced by the interaction of socio-economic, demographic and climatic factors.
- The objective of this study was to assess the effect of land degradation on smallholder farmers' food security and poverty status nexus livelihood diversification in north central, Nigeria.

Materials and Methods

- Structured questionnaire was employed to collect the relevant primary data.
- A multistage random farming household survey resulted into 240 farmers filtered to 92 and 148 land degraded farmers (LDF) and non-degraded farmers (NDF) respectively
- Descriptive statistics, perception index, food security & poverty multidimensional indices, dichotomous regression models were used to achieve the aims of the study.

Results and Discussion

Degraded indicators	F*	%	Perception index	Degraded remarks
Erosion	287	86.97	4.19	Extremely
Nutrient deficiency	229	69.39	3.67	Severely
Soil colour changes	207	62.73	2.43	Moderately
Water logging	173	52.42	2.28	Moderately
Loss of vegetation	102	30.91	1.95	Slightly degraded
Others	69	20.91	1.06	Not /slightly

Table 1: Farmers' knowledge and perception of land degradation (n=330)

- fig. 1 shows only 12% of LDF were food secured while about 40% of NDF were food secured.
- The t-statistics of farmers' expenditure & Cumulative Distribution Function (fig. 3) indicated that there was statistically significant difference between expenditure incurred between the two categories of farmers.
- poverty was more prevalent and severe among farmers whose land was degraded compared non-degraded farmers.

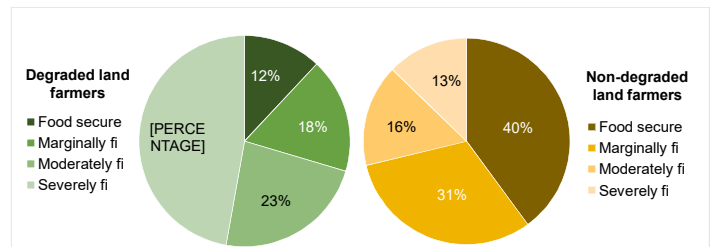


Figure 1: Food security status and cost implications of land degraded and non-degraded farmers

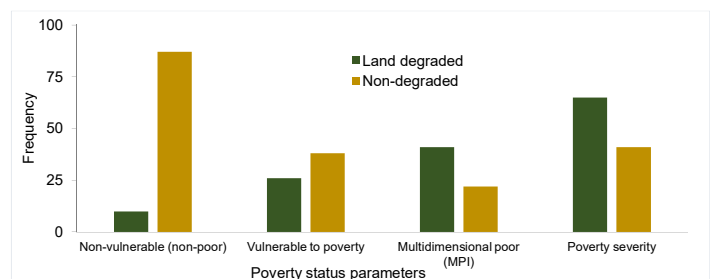


Figure 2: Global multidimensional poverty index of land degraded and non-degraded farmers

- The co-efficient of some socio-economic characteristics, grazing intensity, tree cut and flooding were found to influence food security status, poverty status, determinants of livelihood diversification at different degrees of probability

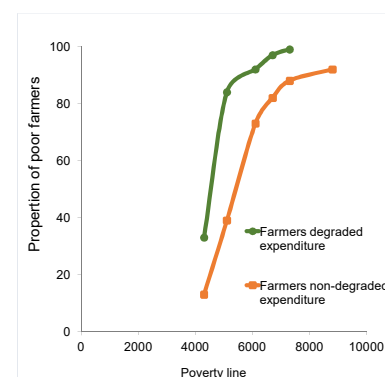


Figure 3: CDF by LDF and NDF farmers' expenditure



Figure 4: Land Degraded area in the study area

Conclusions and Outlook

- This research showed that the LDF are susceptible to higher poverty status, more vulnerable to food insecurity and higher livelihood diversification outside agriculture.
- The distribution of strategies adopted by the farmers in mitigating land degradation were ranked using mean index and these include-
 - inter / mixed cropping / crop rotation,
 - plant tree at edge
 - organic manure among others