

## Deforestation, Vulnerability and Adaptation Strategies of Rural Farmers: The Case of Central Rift Valley Region of Ethiopia

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**Abstract :** In the study area, the impacts of deforestation for environmental degradation and livelihood of farmers manifest in different faces. They are more vulnerable as they depend on rain-fed agriculture and immediate natural forests. On the other hand, after planting seedling, waste disposal and management system of the plastic cover is poorly practiced and administered in the country in general and in the study area in particular. If this situation continues, the plastic waste would also accentuate land degradation. Besides, there is the absence of empirical studies conducted comprehensively on the research under study the case. The results of the study could suffice to inform any intervention schemes or to contribute to the existing knowledge on these issues. The study employed a qualitative approach based on intensive fieldwork data collected via various tools namely open-ended interviews, focus group discussion, key-informant interview and non-participant observation. The collected data was duly transcribed and latter categorized into different labels based on pre-determined themes to make further analysis. The major causes of deforestation were the expansion of agricultural land, poor administration, population growth, and the absence of conservation methods. The farmers are vulnerable to soil erosion and soil infertility culminating in low agricultural production; loss of grazing land and decline of livestock production; climate change; and deterioration of social capital. Their adaptation and coping strategies include natural conservation measures, diversification of income sources, safety-net program, and migration. Due to participatory natural resource conservation measures, soil erosion has been decreased and protected, indigenous woodlands started to regenerate. These brought farmers' attitudinal change. The existing forestation program has many flaws. Especially, after planting seedlings, there is no mechanism for the plastic waste disposal and management. It was also found out organizational challenges among the mandated offices In the studied area, deforestation is aggravated by a number of factors, which made the farmers vulnerable. The current forestation programs are not well-planned, implemented, and coordinated. Sustainable and efficient seedling plastic cover collection and reuse methods should be devised. This is possible through creating awareness, organizing micro and small enterprises to reuse, and generate income from the collected plastic etc.

**Keywords :** land-cover and land-dynamics, vulnerability, adaptation strategy, mitigation strategies, sustainable plastic waste management

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