

Climate change adaptation strategies by small-scale farmers in Ward 28, Chipinge District

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Abstract

This study assessed small-scale-farmer adaptation strategies in the Chipinge district of Zimbabwe's Manicaland Province. The research used qualitative and quantitative methods (triangulation) through a case study methodology wherein farmers in Ward 28 were used as research participants. In selecting samples, this study employed probability sampling and non-probability sampling methods. The primary data were collected through questionnaires, interviews with key informants, focus group discussions and direct observation. Secondary data were mainly obtained from the Meteorological Services Department and used to do trend analyses of climate variables in the study area. The results show that average annual rainfall has decreased by approximately 20% over the last century. The average annual mean maximum temperature statistical data from 1962-2004 show an increase of approximately 2°C. The mean annual minimum temperature increased by approximately 2.5°C. The mean annual minimum temperature data from 1962-2004 also showed a general warming trend of 0.05°C per year. The study found that climate change has severely affected farmers' livelihoods. Crop and livestock production are negatively affected by climate change due to the long recurrent droughts. The study revealed a variety of traditional coping strategies used by local farmers and applied with mixed success, thereby suggesting that local traditional knowledge could provide the basis for developing more effective strategies. The study recommends the need by government departments, policy makers and international development agencies to incorporate the indigenous knowledge of local people in climate change adaptation policies and strategies that can develop effective, cost-effective, participatory and sustainable adaptation strategies. However, not all indigenous practices are beneficial to the community; therefore, it is paramount to first scrutinize the robustness of a strategy before adopting it for climate change adaptation.

Key terms: Climate change; Coping strategies; Adaptation; Small-scale farmers; Climatic variables