CLIMATE CHANGE-INDUCED SOCIO-ENVIRONMENTAL DYNAMICS IN A VILLAGE TANK LANDSCAPE

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Abstract: Catastrophic environmental changes consistently surpass human capabilities in mitigating climatic events in many instances. Disasters like drought and human-animal conflict are predominant in the Sri Lankan context and have been linked to climate change recently. The objective of the current study is to analyse climate change-induced impacts on rural farming livelihoods. Weliwewa Grama Niladhari Division in Sooriyawewa, Hambantota, in southern Sri Lanka was selected as the field site for the study. The primary data were collected through semi-structured interviews with 20 respondents selected randomly from the farming community, in-depth interviews with five key informants, and four focus group interviews with respondents who were selected purposively. The changes in rainfall patterns have converted seasonal farming from two seasons into three seasons. Predicting rain is unfeasible, unlike in the past. Despite the lack of sufficient rainwater for cultivation, farmers have been depending on irrigation water, despite the hardships they endure. Water scarcity has expanded to cause food insecurity and livelihood alterations among farming communities. This has been worsened by the influx of wild animals from the nearby forest areas. One aspect of animal ravage is the adapted dependence on farming lands and stimulation of their behaviour through deforestation driven by development interventions; the other is the constant bio-diversity transformations, which include the increase of agricultural pests (i.e., peafowl, monkeys), which have made farming hard due to the unstoppable and unmeasured invasive effects. The physical deprivation created by those events has left those farmers economically and socially deprived. Proper measurement of bio-diversity transformations is needed, and water depreciation should be sustainably addressed to mitigate their adverse effects on the farming community. The use of technological measures to identify changes in climatic forms while formulating community-sensitive measures will be effective for the well-being of the community and the ecosystem.

Keywords: Biodiversity; Climate change; Drought; Rural farming; Water scarcity