

A CASE STUDY ON CLIMATE-SMART AGRICULTURE, COMMUNITY FARMING, AND CLIMATE CHANGE ADAPTATION IN A SRI LANKAN RURAL VILLAGE

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Abstract

Commercial crop cultivation and rural agriculture are the most vulnerable sectors in tropical countries owing to the changing climatic factors such as extreme temperature, floods, and heavy rainfall. This phenomenon has become a challenge in the field of agriculture, resulting in the spread of poverty and hardships, the loss of employment opportunities and means of subsistence among agriculture-dependent communities. Thus, the present study investigates how a climate-smart agricultural intervention can improve the climate change adaptation and climate change resilience in rural communities of Sri Lanka. A case study was conducted to evaluate the sustainability of a UNDP-implemented climate change adaptation project (implemented in *Walapane, Nuwara Eliya district*), with data derived from interviews (n=30 [farmers who were introduced to climate resilient agricultural techniques]), four focus groups, empirical observations, and document reviews. The analysis indicates that adopting climate-smart agriculture, which includes introducing climate-change-resilient crops and assisting farmers to develop capacities in community farming, would increase the preparedness of rural communities for the effects of climate change. "*Lak Perakum*," which can be considered as a coffee variety that can withstand the effects of climate change was introduced to 'Walapane' area. With the aid of UNDP and other policy interventions, the social capital of the community was enhanced, allowing coffee plantations to become a sustainable component of climate-smart agriculture, thereby aiding community farming and ensuring constant income for rural communities. Overall, the study found that climate-smart agricultural approaches must be paired with social capital and community farming in order to facilitate climate change adaptation in rural areas of the country that are highly vulnerable to its effects.

Keywords: *Climate resilience, Climate Smart Agriculture, Coffee cultivation, Vulnerable communities, Wellbeing*