

Empowering Climate Vulnerable Farming Communities: Climate-Smart Strategies for Enhanced Agricultural Productivity in the Dry Zone of Sri Lanka



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Climate-smart agriculture is a broad, integrated approach with ambitious goals that involve a diverse spectrum of sectors, stakeholders and disciplines and cover a wide range of locations and time scales. For this reason, making a transition to climate-smart agriculture requires careful planning and selecting the best suited strategies at each level. To facilitate the required changes, it is vital to lay out a step-wise guide to support the communities to successful adopting of activities introduced as a climate-smart agriculture approach. Hence, for optimum resource use, a detailed work plan developed specifically focusing on site-specific vulnerabilities, available resources and the lessons learnt from previous efforts related to climate adaptation interventions, is needed.

Background

Addressing the impacts of climate change on agriculture necessitates adaptation programmes developed based on location specific characteristics, highlighting the importance of community-centric, demand-responsive strategies that prioritize community involvement and engagement. Hence, this attempt exclusively focused to develop a comprehensive strategic plan to implement climate-smart agriculture initiatives, emphasizing collaboration, evidence-based decision-making and supportive policy frameworks. The research study was

conducted in two climate-vulnerable villages (Keppetiyawa North and Katanwewa) that have two adaptive capacities though they are within the same administrative district, the Hambantota which is located in the dry zone. Data and information required for this research project was collected using the Participatory Rapid rural Appraisal (PRA) techniques with local stakeholders including farming communities (farmers and office bearers of farmer organizations), field level and top-level officials and project/program implementers attached to both the governmental and non-governmental sector institutions and academics involved in climate-action.



Key Findings

- Villagers of the Keppitiyawa North are more diverse in terms of their income generation, mainly due to their access to resources and higher level of education. In agricultural pursuits in Keppitiyawa North, the predominant crop is rice apart from cinnamon, pepper and coconut cultivations that are mostly at large.
- However, this area faces significant challenges from wild animals, particularly peacocks and monkeys, which frequently damage crops, causing substantial losses to yields. This poses a severe economic threat to local communities, particularly those engage in agriculture as the mainstay.
- In the village of Katanwewa, people are highly affected by severe drought restricting crop cultivation to only one season per year.
- They also do not have any supplementary water sources to mitigate the effects. This issue is particularly threatening farmers who cultivate permanent crops such as cashew and banana.
- However, alongside paddy, farmers cultivate a diverse range of crops including maize, chilli, finger millet, green gram, cowpea, pumpkin, brinjal, cucumber, okra as well as various fruit crops such as banana, papaw, and watermelon.
- Animal husbandry is practiced with free grazing due to availability of ample grasslands. Cattle and buffaloes are primarily raised for milk production and poultry management also is being undertaken in some parts of the village.
- Lacking adequate self-employment opportunities outside agriculture has dealt a severe blow on the wellbeing of this community. They have highlighted the need for training programs to acquire new skills and knowledge to enhance their economic prospects through self-employment initiatives.

- Access to drinking water is not a major concern in the area, as villagers depend on water received from the walawa River to meet their drinking water requirement.
- Lack of awareness amongst farmers on the climate change-induced impacts on livelihoods, non-availability of agriculture extension facilities in many areas, limited technical advice on crop varieties and choices available and limited in water management have been identified as major hurdles.
- Villagers have identified lack of finance to invest in solutions and lack of local/provincial government support as key adaptation barriers.

Conclusions

Despite the similarity in general exposure levels for the selected two villages, the level of climate vulnerability and adaptive capacities of the communities in two locations were rather different from each other. Therefore, adaptation options as well as implementation strategies should be tailor made to the specific location/ community.

Policy Recommendations

Selection of suitable climate adaptive actions to be implemented within a particular location/community should align with contextual factors of the considering location/community. Accordingly, without proposing blanket solutions, strategic actions for climate adaptation should cater to the maximum level by considering specific characteristics of the community such as resource availability, financial capacity, knowledge and attitude of the community, and prevailing institutional factors. Otherwise, despite the technical suitability of suggested actions, actual adoption will remain lower with possible loss of resources being put forward for such actions.

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