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## Farmers’ Perception and Adaption to Climate Change in the Central Dry Zone of Myanmar

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### Abstract

The Central Dry Zone covers about 13 % of Myanmar and is home to nearly a third of the total population of 52 million. The majority of households depend on agriculture-based income (83 %). Besides low profitability, poor diversification, and high reliance on credit, these agricultural households are subject to additional stress by soil degradation, erratic rainfall patterns and extreme temperatures, and commodity price fluctuations. Particularly the climate change phenomena have become recently a major constraining factor for agricultural production in the Dry Zone. In this study we explore how farmers perceive agricultural problems in relation to climate change, and which strategies they apply to cope with and adapt agricultural practices to climate change based on traditional knowledge. Based on household surveys, participatory rural appraisals (PRA) and key-informant interviews it can be concluded that most farmers recognise climate change as a key constraint as they perceive their agricultural production being severely impacted, particularly by erratic rainfall. In response to increasingly frequent pre-monsoon droughts, some farmers have actually abandoned during the past 15 years cultivating rice as the main subsistence and market-crop, but also the cultivation of pre-monsoon crops such as sesame. Most farmers have traditionally been dealing with climatic risks by providing supplementary irrigation, e.g. by establishing tube wells, by cultivating short-cycled cash crop instead of rice, and by substituting annual crops by fruit orchards. In the recent past, their adaptation repertoire has been complemented by institutional assistance from government organisations, namely in the form of improved weather forecast, training activities, and the provision of adapted seeds. In addition, there has been improved access for some farmers to communication infrastructure or improved agricultural technologies. These differential affect adaptation to climate change and changes in cropping patterns and agronomic practices. We will present preliminary findings from the ongoing research project on how traditional adaptation strategies blend and interact with external “modern” strategies to adapt to climatic change processes in the dry zone of Myanmar.

**Keywords:** Drought, information technology, institutional assistance, *Oryza sativa*