

**The role of indigenous agricultural knowledge systems for adaptation to the effects of
climate variability in Kondoa district, Tanzania**

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Tanzania has been experiencing an increase in frequency of climate variability extremes such as drought and floods. The spatial distribution and the intensity of these extremes extend beyond the expected weather events and said to be aggravated by global climate change. Floods and drought are known to affect socio-economic activities, including agricultural productivities. This study has investigated the role of indigenous agricultural knowledge systems for adaptation to the effects of climate variability in Kondoa district, Tanzania. The study used questionnaires and focus group discussion as basic tools for gathering information. A total of 109 respondents were involved in this study. 94 respondents were involved in questionnaire survey and 15 were key respondents. Purposive sampling technique was used to select participants for the focus group discussion. Simple random sampling was used to select household heads in the sampling frame. The study revealed that local people have both indicators and practices which are used in minimizing key climate based vulnerabilities that are related to agriculture. The common indicators used for forecasting are birds, plants and insects behaviors and thundering. The common soil management practice revealed was the use of animal manure. These practices correlate well with modern climatic information gathered in the study area. This study concluded that indigenous knowledge used by the local people in Kondoa district has significant effect in reducing key vulnerabilities in agriculture. To achieve sustainability of this knowledge, the study recommended that, a documentation of indigenous knowledge should be preserved and incorporated in education systems and the national strategy for combating effects of climate change and variability.