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IMPACTS OF CLIMATE CHANGE AND VARIABILITY ON MAJOR CROP PRODUCTION IN ANKESHA GUAGUSA DISTRICT OF AWI ZONE, NORTH WESTERN ETHIOPIA

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ABSTRACT
Ethiopia is one of the developing countries in which agriculture is the primary source of its economy. Being dependent mainly on rainfall, this sector has been adversely affected by climate change and variability. But the change in all parts of the country is not equal and the scientific knowledge on the magnitude of local climate change and variability and its impact on crop production is lacking. Therefore, this study was conducted to generate research-based knowledge on the trend of climate change and variability and its impacts on major crop production in Ankesha Guagusa district. The required data for this study was generated from different sources. Mainly, the climatic data; monthly rainfall and temperature data of the study area was obtained from the National Meteorological Agency and crop production data with cultivated area was obtained from district's Agricultural Office. It relied on both qualitative and quantitative methods of data collection and analysis. The result of temperature and rainfall data analysis indicated that inter-annual and seasonal rainfall variability is high while temperature has been significantly increasing over time. As a result crop production is frequently declined in different years. Rainfall variability and crop production correlation also shows high correlations and this suggests that, crops are highly sensitive to the impacts of climate change and variability. Thus, there needs identifying the local adaptation mechanisms of the rural communities and the adaptive capacity of the local people needs to be improved to overcome the adverse impacts of climate change and variability on crop production.