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Impact Assessment of Climate-Smart Agriculture Practices Among Smallholder Farmers in Amaro Districts, Tanzania,

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Abstract

Amaro Districts in Tanzania are facing climate-related challenges such as drought and unpredictable rainfall, which affect smallholder farmers' agricultural productivity. Qualitative data were collected through semi-structured interviews and focus group discussions with farmers, community leaders, and extension workers. Data analysis involved thematic coding to identify key themes related to CSA adoption and its effects on agricultural productivity and resilience. Farmers reported a significant increase in maize yields by 30% when practicing CSA methods such as crop diversification, water management, and soil conservation techniques. The study demonstrates that CSA practices can enhance the adaptive capacity of smallholder farmers to climate variability, leading to improved agricultural productivity and income stability. Local authorities should support farmers in adopting CSA through extension services, technology dissemination, and policy frameworks promoting sustainable agriculture.

Keywords: *African geography, climate change, qualitative research, sustainable agriculture, smallholder farming, rural development, thematic analysis*