



# Innovative Water Management Strategies for Irrigated Agriculture in Semi-Arid Ethiopia: A Social Impact Study

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## Abstract

Irrigated agriculture in semi-arid regions of Ethiopia faces significant challenges due to limited water resources and climate variability. A mixed-method approach combining quantitative surveys and qualitative interviews was employed to assess farmer perceptions and practices related to water management innovations. Farmers reported increased crop productivity by up to 30% in irrigated fields where innovative water-saving techniques were implemented. The study highlights the potential of integrated water resource management strategies for sustainable agricultural development in semi-arid Ethiopia, particularly in terms of enhancing resilience and livelihood security. Policy makers should prioritise funding for research and implementation of proven water-saving technologies to support smallholder farmers in semi-arid regions. Irrigation, Semi-Arid Regions, Water Management, Social Impact Study

**Keywords:** *African Geography, Semi-Arid Regions, Quantitative Surveys, Irrigation Systems, Water Scarcity, Climate Variability, Social Impact Analysis*

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