PROMOTING CLIMATE RESILIENT AGRICULTURE THROUGH *INSITU* RAINWATER HARVESTING TECHNIQUES

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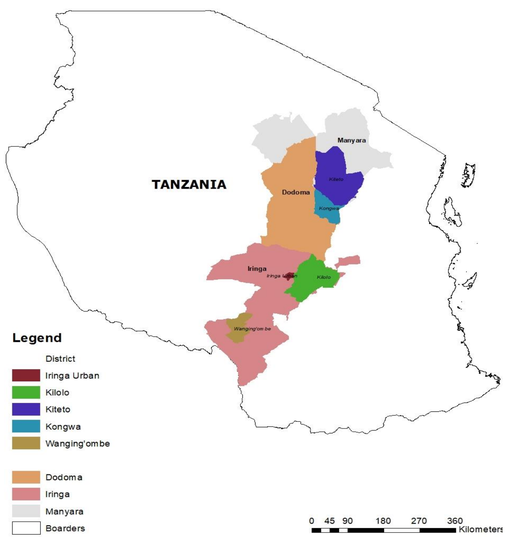
Photo credit: Elirehema Swai.

BRIEF DESCRIPTION

Insitu rainwater harvesting techniques notably annually and residual made tied ridges conserve rainwater in farmer's fields for optimizing crop production in semi-arid areas characterized by inadequate and erratic rainfall. They are effective in delaying crop moisture stress by improving soil moisture retention, enhancing infiltration, and reducing water loss from surface runoff.

VALIDATION, SCALING SITES & SUITABLE AGROECOLOGIES FOR IMPLEMENTATION



The technology was validated extensively in semi-arid zones of Tanzania characterized by inadequate and erratic rainfall. These include Kongwa District in Dodoma Region; Kiteto District in Manyara Region; Iringa rural and Kilolo districts in Iringa region; and Wangingombe district in Njombe Region. The study involved the use of open ridges, tied ridges and residual tied ridges compared with conventional flat cultivation tillage.

KEY BENEFITS OF TIED RIDGES

Yield: On average tied ridging tillage method can **INCREASE MAIZE GRAIN** by **58%**

Soil water retention: Effective in **CONSERVING WATER** by **86%**

Reduced soil loss: **Can be reduced up to 88%** under tied ridging tillage method

Economic gain: **Can go up to above to 60%** under normal rainfall condition of 400mm/season

PARTNERS INVOLVED

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