Building Capacity for Resilient Food Security in Tanzania

The challenge

Climate change, which causes erratic and extreme weather conditions such as floods, droughts, and changes in growing seasons, is a major threat to agriculture. Agriculture also contributes to climate change through greenhouse gas emissions, deforestation, and land degradation. Agriculture, therefore, both contributes to and is affected by climate change.

In response, the agriculture sector must sustainably increase productivity and adapt to the impacts of climate change to ensure food security for all. One of the approaches to achieve this is by making agriculture climate smart.

Tanzania's government is committed to supporting the agriculture sector to cope with and adapt to climate change by developing relevant policy instruments. These include the Agriculture Climate Resilience Plan (2014–2019), National Climate Smart Agriculture Program (2015–2025), and Climate Smart Agriculture Guideline**.**

This Building Capacity for Resilient Food Security in Tanzania project is building on and supporting these efforts by addressing the capacity gaps within the country to effectively respond to the challenges climate change poses to agriculture. It is an initiative of the Government of Tanzania in partnership with the United States Department of Agriculture (USDA) and supported by USAID.

In this project, the Ministry of Agriculture (MoA) and the Ministry of Livestock and Fisheries (MLF) and Zanzibar's Ministry of Agriculture, Natural Resources, Livestock and Fisheries (MANRLF), Tanzania's Meteorological Agency (TMA), and the President's Office of Regional Administration and Local Government (PORALG) as well as regional training centers are working alongside the three contracted agencies to enhance various identified capacities geared towards building agriculture resilience and food security. These are the International Institute of Tropical Agriculture (IITA), World Agroforestry Center (ICRAF), and the United Nations Food and Agriculture Organization (FAO)

Classification of CSA practices and technologies demonstrated by the project

Crop Management practices and technologies

- **Improved varieties:** Introduced new varieties of important crops that are drought tolerant, high-yielding, and have an improved nutritional profile. These include maize, rice, sorghum, pearl millet, beans, cowpea, Bambara nuts, pigeon pea, sunflower, cassava, yam, and banana
- **Integrated pest and disease management (IPM):** This is a broad-based approach that integrates practices for economic control of pest and diseases

- **Improved agronomic practices:** Introduced improved crop management, including correct spacing, planting, weeding, pesticide management, and harvesting

Soil and water conservation practices and technologies

These are structures, which reduce run-off and eventually soil erosion and conserve soil productivity, therefore helping to increase yield especially in sloping land. This category also includes rainwater harvesting practices and technologies such as:

- Open ridges
- Tied ridges
- Pits i.e., Chololo
- Terraces ("fanta juu", "fanya chini")
- Bunds

Conservation agriculture practices: A set of soil management practices that minimize the disruption of the soil structure composition of natural biodiversity with the potential to increase crop yield while enhancing the long-term environmental and financial sustainability of farming. These include:

- Cover cropping
- Mulching
- Crop rotation
- Intercropping
- Minimum tillage

Soil fertility management practices and technologies

Introduced appropriate use of organic and inorganic fertilizers for various crops. They include:

- Urea Deep Placement (UDP) rice farming in Zanzibar
- Manuring
- Integrated soil fertility management (ISFM)

News items on the project

Tanzania farmers winning against climate change

Farmers embrace climate-smart agriculture in Tanzania

Project supports Climate-Smart Agriculture (CSA) teaching in agricultural training institutes in Tanzania

How to build a vibrant, sustainable sub-national climate-smart agriculture alliance: lessons from district CSA alliances in Tanzania

IITA trains tutors on climate-smart agriculture for sustainable food security in Tanzania

Building media capacity on reporting climate-smart agriculture in Tanzania

US Government supports training on climate-smart agriculture for local government planners in Tanzania