

# BUILDING CAPACITY FOR RESILIENT FOOD SECURITY IN TANZANIA: IITA



Climate change, which causes erratic and extreme weather conditions such as floods, droughts, and changes in growing seasons, is a major threat to agriculture. The Building Capacity for Resilient Food Security Project in Tanzania is working in partnership with the government of the United Republic of Tanzania to “Strengthen knowledge and systems to target climate action” as part of Tanzania’s Agriculture Climate Resilience Plan.

**Goal:** To strengthen the implementation of agriculture development and food security policies and programs at the local level and to build the capacity of farmers to be more resilient to the effects of climate change in agriculture. The project began in 2017 and will conclude in August, 2021.



The International Institute of Tropical Agriculture (IITA), is one of the three implementing partners alongside the World Agroforestry Center (ICRAF), and the United Nations Food and Agriculture Organization (FAO).

## The project is focusing on the following five capacities:

- **Capacity 1 (ICRAF):** To determine the potential benefits and tradeoffs of CSA practices and technologies under different local scenarios by region and production systems
- **Capacity 2 (IITA):** To select CSA practices for specific production systems and regions and to develop technical specifications for these practices.
- **Capacity 3 (ITA):** To develop demonstration and dissemination activities and products (electronic and print) to inform and engage local government authorities, extension staff, academics, service providers, agribusiness leaders, and policymakers how to apply CSA practices to achieve agricultural resilience
- **Capacity 4 (IITA):** To ensure that all agriculture extension trainees know the CSA approaches to achieve a resilient agriculture sector, applicable practices, and how to modify applications for different regions and cropping systems.
- **Capacity 5 (FAO & TMA):** To convert agrometeorological data and analyses into timely and actionable information for farmers

## CSA PRACTICES AND TECHNOLOGIES DEMONSTRATED BY THE PROJECT

### Conservation agriculture practices

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

### Soil fertility management practices and technologies

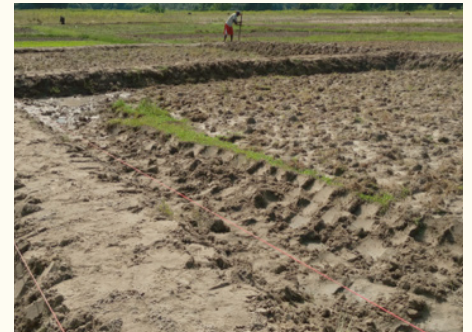
- Urea Deep Placement (UDP) rice farming in Zanzibar
- Manuring
- Integrated soil fertility management (ISFM)

### Crop Management practices and technologies

- Improved varieties
- Integrated pest and disease management (IPM)
- Crop rotation and intercropping

### Soil and water conservation practices and technologies:

- Open ridges
- Tied ridges
- Pits (Chololo)
- Terraces ("fanya juu", "fanya chini")
- Bunds



Some of the CSA practices being piloted by the project: (left) mulching of banana plants; (middle) open ridges and (right) rice buds for conserving soil and water.

## SUCCESS OF THE PROJECT TO DATE

### CAPACITY 2



**14** prioritization workshops held to select CSA practices and technologies to demonstrate together with farmers and experts



**15** demonstration plots established



**24** Farmers field day organized to demonstrate CSA practices to farmer and other stakeholders



**1000** plus farmers have taken part in the farmers' field days



**10** CSA practices and technologies being demonstrated

### CAPACITY 3



**45** journalists from various media outlets trained on reporting on CSA in both mainland and Zanzibar



**12** Extensions workers trained on packaging and disseminating information on CSA



**20** plus articles published in media houses on CSA



**4** documentaries developed on CSA aired on TV and over 10 radio programs



**7** fliers developed for CSA practices being demonstrated in each agroecological zones

## CAPACITY 4

3

Curriculums reviewed for levels 4, 5, and 6 of the National Technical Award (NTA) in General Agriculture to identify CSA gender and nutrition gaps and supplementary materials developed to addressing gaps identified

80%

of content of the supplementary materials incorporated in the new revised curriculum rolled out in October 2019

65

Tutors from public and private Agriculture Training Institutions trained on delivering content on CSA incorporated in the new curriculum

50

key decision-makers and planners at districts and regional levels trained on how to plan for climate change and implementing CSA in a landscape approach

75

Local Government Officers trained on gender and nutrition sensitive CSA practices and technologies and how to apply them in different climatic regions and production



## CASE STUDY 1: HELPING TANZANIA FARMERS WIN AGAINST CLIMATE CHANGE

*“Although I do not have a weighing balance to measure the yield, I personally see a big difference compared to the past when I used to cultivate without considering the CSA practices and technologies. I could carry a bunch of the bananas with one hand. But now I have to carry a bunch with both hands, and sometimes on my head due to its heavy weight,”* says Hassan Haji Fumu, a farmer from Mahonda village in Kaskazini B district, Zanzibar.



*IITA's Project officer Bakari pays Hassan a visit in his farm to see how he is progressing in testing CSA practices and technologies.*

Hassan is one of the farmers learning about the CSA practices and technologies at a Farmer Field School in his village. After seeing the good results on the project's demo plot, he tried some of the CSA technologies and practices on his farm. The project gave Hassan some banana suckers, which he planted in a portion of his field following the new farming practices and technologies learned.

*“Now I rely on forecasting information via radio and TV. This is very important because it helps me to make the right decisions,”* he says.

The project is also providing farmers with down-scaled seasonal weather forecasts accompanied by advice and recommendations on what farmers can do based on the predictions.

The project has trained over 1,500 farmers on improved technologies and practices throughout Tanzania thus setting the ground for scaling up CSA technologies and practices to help farmers in Tanzania to cope with climate change and secure income and food for smallholders.



*Farmers listening during FFDA-IITA*

## CASE STUDY 2: ENHANCING CSA LEARNING IN AGRICULTURE TRAINING INSTITUTES

*“The revised curriculum was well received, especially the new CSA module. The students are also excited because they are getting new skills and knowledge that meet the needs of future job market demands,”* says Orest Ivangavanga, a tutor at Mahuya College.

Orest is one of the tutors from agricultural training institutions who has received training and supplementary materials from the Building Capacity for Resilient Food Security project. This is as part of efforts to ensure CSA is taught comprehensively to the extensionists who will in turn, support farmers to adopt these technologies and practices.



*Prosper Makundi (standing) Head of Environmental Management Unit building awareness for the tutors from Agriculture Training Institutes on CSA's as part of building their capacity.*



*Tutors during a field visit to a CSA demo plot as part of the training.*



*College students at a demo plot for practical training on CSA practices and technologies.*

Most of the colleges also established demonstration plots and CSA clubs for the students to learn about the practices and technologies practically.

*“Students have been implementing what they have been learning in class about CSA in the demo plot. For example, they have planted Gliricidia trees for soil management and implemented soil and water management technologies like ‘fanya juu’ and ‘fanya chini’ terraces,”* said Orest.

*“The new modules have enabled us to understand the appropriate technologies and practices to implement in relation to climate change and for different agroecological zones. At our college in Songea, we practice contour farming because it is a hilly area; the technology stops the soils from being washed away by heavy rainfalls. This has helped us to use the land that before was difficult to cultivate due to fear of losing crops from rain,”* says Mtabili Mgendwa, a second-year student, pursuing his Certificate of General Agriculture at Mahuya College.

The project trained 63 tutors and colleges across the country, both government and private, in two Training of Trainers (ToT).

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