



**6<sup>th</sup> November**  
**Nairobi, Kenya**

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# **Sowing the Seeds of Transformation: Tanzania's Digital growth in Agriculture**



#ALE2023 #AgriFinALE2023



## Chapter 1: Pre - 2010 Era

## Pre – 2010 Era

### Marketing



- Farmers had no market access (unregulated selling).
  - Products were not standardized or graded.
- Producers received less than 10% of their goods' value.

### Productivity



- Lack of market incentives led to subpar production.
- Value chains were controlled by a few individuals, which hurt farmers, especially men.
- The sector was primarily dominated by financially powerful and well-connected individuals

### Inclusivity



- Farmers lacked proper recognition for their products.
- Many value chains were controlled by a select few, often at the expense of farmers.
- Payments to farmers were made manually in cash.
- Farmers faced difficulty accessing loans due to their perceived informal status.

### Info & Tech Access



- Information about the products was hard to find.
- The government had difficulty collecting data related to production, input needs, storage locations, and other areas requiring support

## Pre – 2010 Era...

### Low Productivity

Low agricultural productivity was a significant challenge. In 2009, Tanzania's maize yield was only around 1 ton per hectare, well below its potential.

### Rural-Urban Migration

Rural-urban migration resulted in an aging farming population and labor shortages in rural areas. In 2002, 70% of the population was living in rural areas, and migration to urban centers was increasing.

### Gender Disparities

Gender disparities in agriculture were prevalent, with women having limited access to resources. In 2007, women made up 73% of the agricultural labor force but had limited access to land

### Government Interventions

The Tanzanian government implemented various agricultural policies and programs to promote rural development and address food security. The Kilimo-Kwanza initiative, launched in 2009, aimed to revitalize the agriculture sector.

### International Aid & Development

International organizations and development partners supported various agricultural projects and initiatives aimed at improving food security and income generation.

A smiling man wearing a straw hat and a plaid shirt is talking on a mobile phone. He is standing in a field with a herd of brown cows in the background. The scene is set outdoors with a bright sky and some green hills in the distance. There are green decorative shapes in the top-left and bottom-left corners of the image.

## Chapter 2: Building blocks for more structured and inclusive agriculture sector From 2010 to 2022

# The era of things coming together

**What is special is how the initiatives complement each other:**

- *The formation and re-establishment of farmer groups and cooperatives helped to lay foundation for rural financial inclusion.*
- *The emergence of mobile banking and simplified KYC allowed financial service providers to onboard millions of farmers.*
- *Marketing of crops via warehouse receipts made available more data on farmers, commodities, and value chains.*

## Leveraging technology and developing solutions

- Instant bank accounts (NMB Chap Chap)
- Payment of AMCOs farmers via mobile money (Tigo Korosho 2018)
- Digital banking and mobile money solutions
- Warehouse Receipts Management System (WRMS)
- Cooperative Supervision Management Information System (CSMIS)
- TMX Online Trading System

## Emergence of new Institutions

- Tanzania Cooperative Development Commission
- Tanzania Mercantile Exchange
- Warehouse Receipts Regulatory Board
- Mobile money operators
- CRDB Foundation

## Legal and regulatory reforms

- The Cooperative Societies Act of 2013
- The Warehouse Receipts (Amendment) Act of 2015
- The National Payment Systems Act of 2015
- The Commodity Exchanges Act of 2015



# The Journey

**2011**

- Strengthening of Cooperatives
- Dawn of Access to Finance

**2015**

- Launch of the Commodity Exchange
- Expansion of WRS in the country
- Launch of the CRDB Foundation
- Access to finance for MSMEs

**2016/17**

- Increased inclusivity where many farmers in south regions opened bank accounts
- Increased P2P transactions
- Increase of Cooperatives in the country
- improved involvement of women & youth

**2019**

- Piloting of the Commodity Exchange on sesame seeds
- CRDB accredited to GCF
- Access to market amid the pandemic

**2022**

- Issuance of electronic Warehouse Receipts
- Introduction of Coffee Cherries trade on the Exchange
- Increased in Farmers' revenue through price discovery

## Milestones

5,392 Cooperatives registered in CSMIS out of 7,392 in total

8.3 million cooperative society members in 2023

17 commodities traded through Warehouse Receipts System since 2008

72K tons of cocoa, coffee, sesame, green grams and pigeon peas worth \$113m traded via TMX by 2023

86% of adults have access to a mobile phone and 72% have mobile money accounts



# Progress

## Registration Summary

Registered Coops	AMCOS	SACCOS	Other Cooperatives
5,396	3,676	1,212	508

## Members Registration Summary in CSMIS

Total Members	Non-members	Remaining
929,596	135,861	7,234,543

## Progress Made in CSMIS User Training

Total Users Trained (incl. Coop Officers)	Remaining
3,600	3,820

# Progress

## Using CSMIS, famously known as MUVU

- System is integrated to Digital Weighing Scales
- Farmers get instant information of their commodity

CROP PRODUCE RECEIPT


AMANA AGRICULTURAL MARKETING COOPERATIVE SOCIETY LIMITED

Usajili: PRIHR-MUF-2022-63  
Anuani: 900 MUFINDI  
Simu: 255678900065  
Baruapepe : kissuuramadhani@gmail.com

Halmashauri: Mufindi DC  
Kata: Sao Hill  
Wilaya: Mufindi  
Mkoa: Iringa

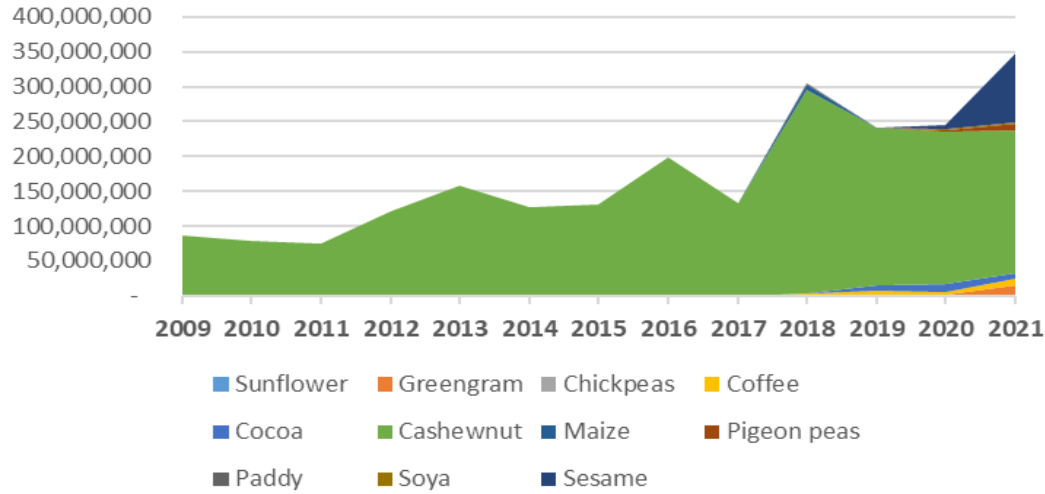
STAKABADHI YA MAZAO  
KOROSHO

Kadi / Namba	029-3271-02128		
Jina la Mkulima	CATHERINE WILLIBARD KIIZA		
Jinsia	FEMALE		
Simu	255754326438		
Kijiji	78, MUFINDI		
Kiasi/Uzito/Ujazo:	3,200 KG		
Kiasi Kwa Maneno:	THREE THOUSAND TWO HUNDRED KILOGRAM		
Ubora :	GRADE 2	Tarehe :	21 JAN 2023
Jina la Ghala :	KIJANI KIBICHI		
Jina la Mpokeaji :	AMANA A AMCOS		

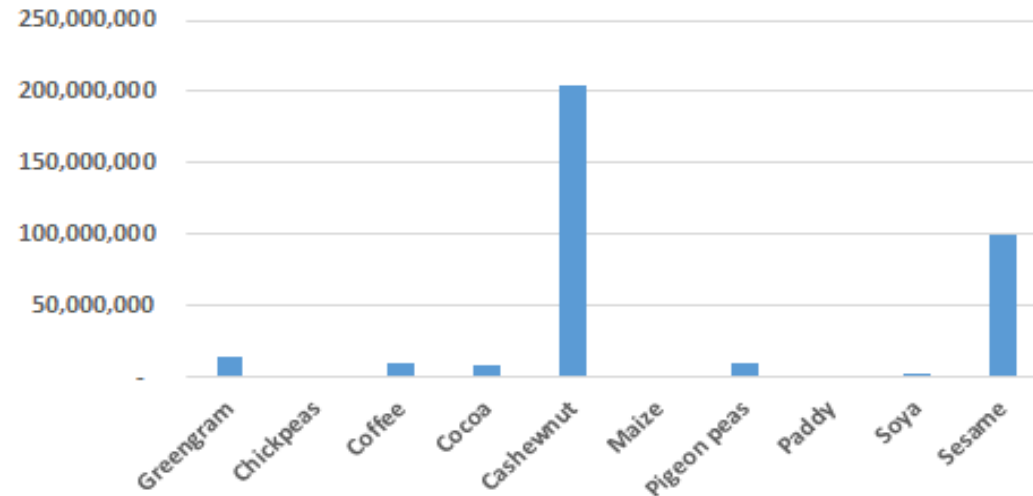


# Success Stories (2010 – 2023)

### Commodities sold via WRS 2009 - 2021



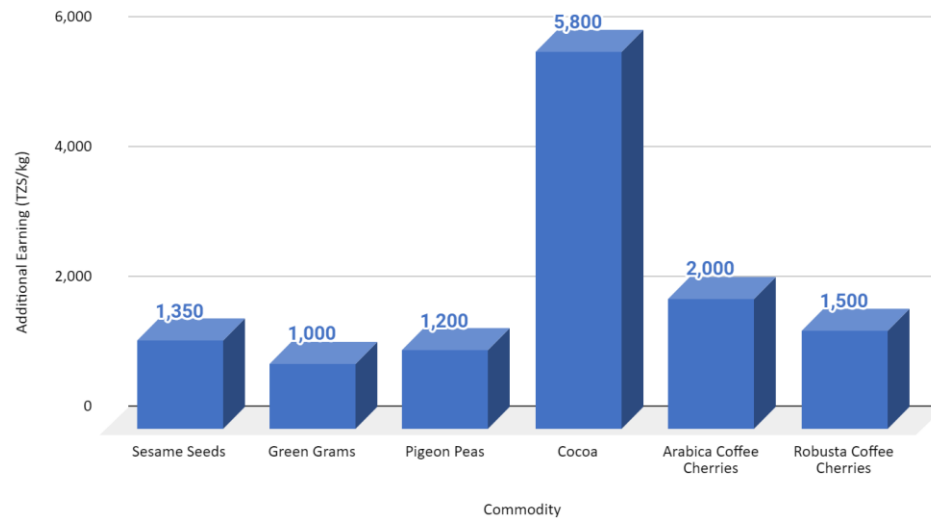
### Commodities Sold Via WRS 2021 (in kgs)



### RCN Price Trend Before and After WRS



### Additional Earning to the Farmer per kilogram by trading through TMX



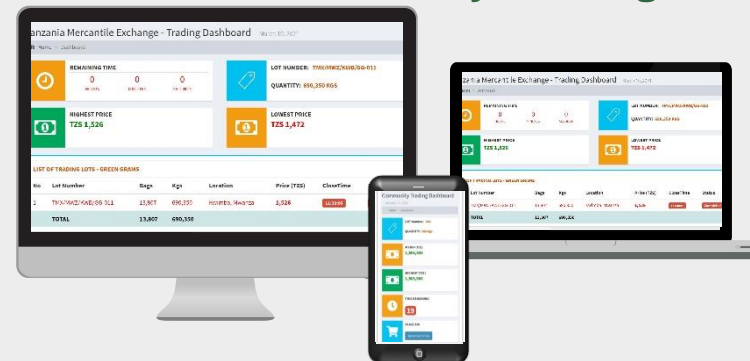
# Progress

## TMX progress

1. 8 settlement banks participating in auctions managed by TMX, including the main local banks CRDB and NMB.
2. Online trading system is in place, facilitating price discovery, fair competition and market transparency.
3. Awareness is ongoing with more than 190,000 people, including farmers, traders, financial institution staff and others trained since 2018
4. Value chain analysis done on crops traded on platform, including sesame, green gram, chick peas, cashew nuts, cocoa, coffee, tea, cotton and sisal.
5. Collaboration with other commodity exchanges including Ghana Commodity Exchange and Ethiopia Commodity Exchange



## Online Commodity Trading



# Overall Progress – In a nutshell

	WRS	TMX	TCDC	CRDB
Productivity improvements by farmers	Productivity level, for example in the cashew nut crop increase by an average of 12% per year	Price Discovery & market information mobilized farmers to increase their production	Improved service provision (inputs, fertilizers, packages) through availability of farmers information	710,000 smallholder farmers registered with simplified KYC through Mkulima serving Account
Price increases of commodities through the system	Price has improved from 500tshs to 4000tshs, a more than 200% increment	Online Trading System provides a fair competitive environment enabling price discovery	Proper Strategic Planning for the next crop season through market information, improved livelihood of farmers	Total Agribusiness Loan/Lending exposure – TZS 801Bn
Availability of data on quantity and quality of commodities stored and sold in country.	Quality of produce improved, i.e cashew nut grade A from 20% to 98%	2019 – USD 639.6k 2022 – USD 46.9m Average gain per kilo to farmers - 2,140/- from 2019 - 2023	Data on deliveries and sales of commodities of farmers.	Wekeza Akiba Project Insurance Products Imbeju Program Sim-banking
The number of AMCOS and farmers.	800 AMCOS have utilized the system in the 2022/2023 season compared to around 150-200 in 2010	Timely Payment to farmers through AMCOS, where T+2 settlement has been achieved	1,065,457 members registered through MUVU	43% of the market share for the total agricultural lending in Tanzania

A woman with dark hair, wearing a light blue short-sleeved shirt and a patterned skirt, is smiling as she harvests tea in a lush green field. She is leaning over a large, woven wicker basket. The background is filled with dense green foliage and trees. The image is framed by a white border with green geometric shapes on the left side.

## Chapter 3: Gaps

# Despite progress gaps remain

## Women



- Fewer women participating in value addition
- Limited access to male-dominated markets
- Limited Inclusivity

## Youth



Lack of capital for youth engagement in value addition

## Technology



- Difficulties in accessing trade opportunities; outdated technology
- Quality verification
- Limited integration of trade systems
- Poor Storage facilities

## Productivity



Lack of capital for small-scale machine purchases

## Crops



- Dominance of the system in southern regions
- Cash crops overshadowing other crops
- Gender disparity in crop sales



## Chapter 4: Going Forward



## Desired Impact

Increased  
inclusiveness

Improved  
resilience,  
productivity,  
and efficiencies

Income and  
competitiveness  
growth

# Desired Impact



## Digital transformation

- CRDB is looking to expand into more disruptive technologies such as Robotic processes automation and integrations with national databases to facilitate future transformation across all the agri sector and it's value chain



## Inclusive financing

- Deepening access to financial literacy and education with standardized agri-toolkits, curriculums and included financially with tailor-made services



## Agricultural financing

- CRDB is looking to enhance credit for all actors in the agriculture value chain, with a special focus on small holder farmers



## Diversification and expansion

- The Group is looking to expand locally and regionally to enhance international presence and extend services in all sectors



## Sustainable Finance

- Advanced stages of rolling out the \$200m Tanzania Agriculture Climate Adaptation & Technology Deployment Program to provide affordable credit to farmers engaged in climate resilient agricultural practices

# Targets to be Achieved

## TCDC

- Reach the remaining Gap of 7,234,543
- Scaling up on Traceability and tracking aiming at improving farmers' access to information
- Increase provision of e-Coop Services through digital solutions
- Grading of Cooperatives

## WRRB

- Expanding into new regions. By 2025, at least 50% of all regions to be covered with the service. By 2030, 100% to be covered.
- Improve collateral management facility for women and youth to reach 95%
- Improvement on the system capabilities to accommodate more data & information
- Formalize more small farmers and producers into their system to improve their inclusivity, resilience and earnings.

## CRDB

- Data research and collation to integrate within the online climate risk assessment interface, enabling financial institutions to estimate farmers' climate risk rating), providing recommendations on technologies to improve productivity, and incorporating flexibility
- 6,144,344 beneficiaries to the system for the next five years

## TMX

- More volumes to be traded with a potential to reach commodity trade value of USD 365m per year.
- Systems integration
- Scale up participation by incorporating complex market architectures including Futures market and Options

## Targets to be Achieved

### CRDB

- Develop an online interface for CRDB Bank and other interested financial institutions to utilize to access covering climate change modelling and climate change variability, including climate-crop modelling and associated climate risks
- Promote capacity building on financial inclusion for youth & women and access to finance through the iMbeju program to reach 100,000 and TZS 10 Bil deposits
- Expand insurance coverage to farmers(crop and health), storage warehouse facilities and training to farmers
- Open 100,000 bank accounts for farmers and improve their financial inclusivity



**GREEN  
CLIMATE  
FUND**

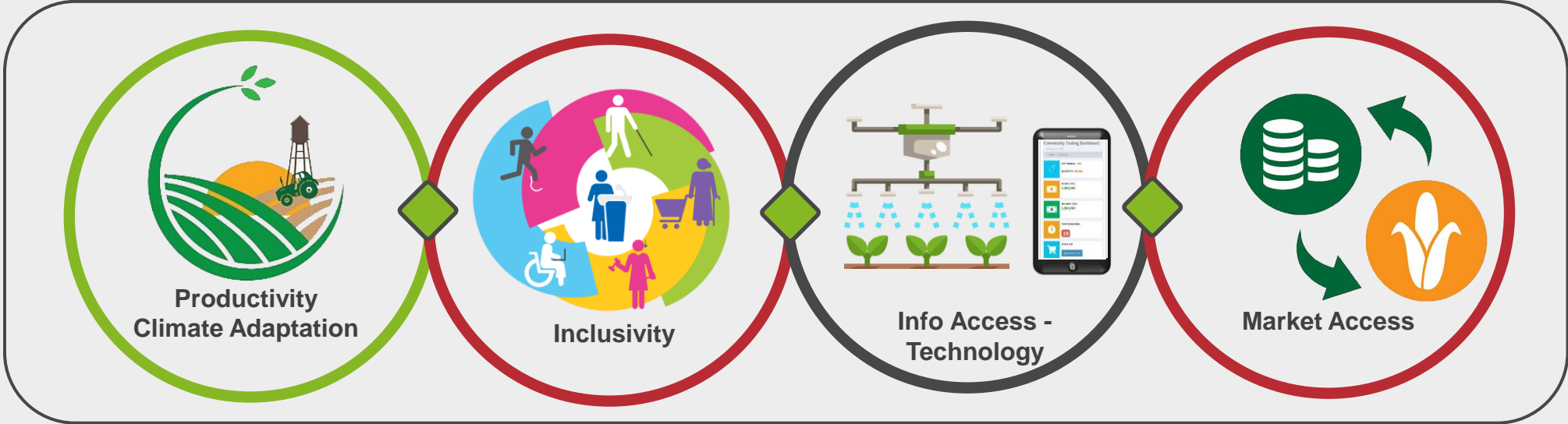
# Coming out of the maze: The Super Platform (MUVU)

Data Analytics

Financing

Insurance services

Improved Livelihood



COOPERATIVE SUPERVISION MANAGEMENT INFORMATION SYSTEM (CSMIS)  
MUVU



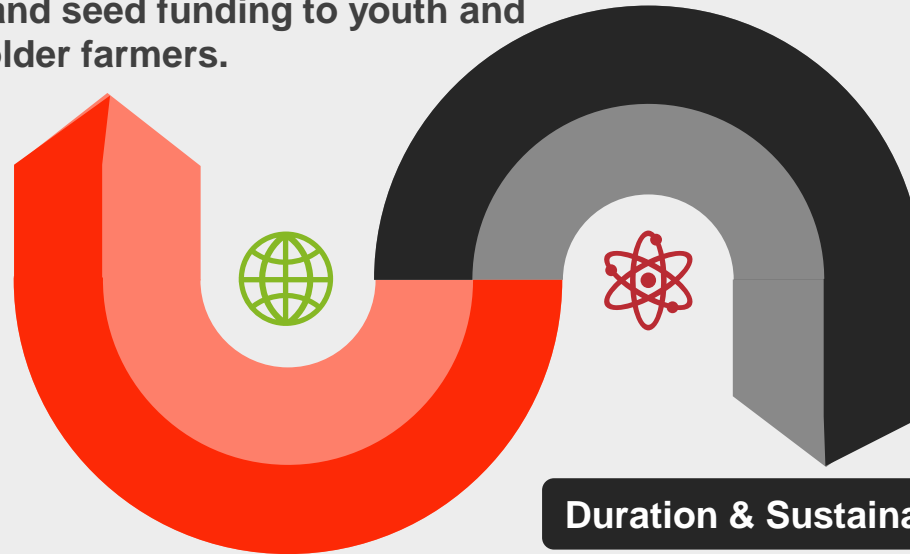
# Areas of Partnerships

## Climate Adaptation & Digital Solutions

Financing of USD 70 million

Focus on:

- Creating more access to financial services to farmers
- Creating more market linkages for their produce
- Facilitating access to real time data to farmers
- Building capacity and seed funding to youth and women to small holder farmers.



## Duration & Sustainability

Solutions to embarked on 5 year period with sustenance found in:

- Increasing demand of food crops
- Trade Policies
- Increase demand of Data



*Thank You!*