



Circular Food Systems: Policy Review and Gap Analysis in Tanzania

Validation Proceedings Report

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(Virtual)

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Abbreviations and Acronyms

ACIAR	Australian Centre for International Agricultural Research
ARU	Ardhi University
ASDP	Agriculture Sector Development Programme
BBT-YIA	Building a Better Tomorrow: Youth Initiative for Agribusiness
CAADP	Comprehensive Africa Agriculture Development Programme
CFS	Circular Food Systems
ESA	Eastern and Southern Africa
ESRF	Economic and Social Research Foundation
FANRPAN	Food, Agriculture and Natural Resources Policy Analysis Network
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IITA	International Institute of Tropical Agriculture
NAP	National Agricultural Policy
NIR	National Institute of Irrigation
TAFSI	Tanzania Agriculture and Food Security Investment Plan
TAHA	Tanzania Horticulture Association
TISA	Transforming Irrigation in Southern Africa
TZ	Tanzania
ZA	Zanzibar

1. Introduction

The Circular Food Systems (CFS) validation workshop, organized by ESRF, was a key activity under the CFS project in Eastern and Southern Africa (ESA). Funded by The Austrian Centre for Agriculture Research (ACIAR) and led by The Australian National University (ANU). It involves key regional partners across Tanzania, Mozambique, Zimbabwe, and South Africa, including ARDHI University, Eduardo Mondlane University, The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), and The Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), working alongside local and international collaborators to promote sustainable and inclusive Circular Food Systems., the project aims to apply the global concept of circular food systems to enhance agricultural productivity, sustainability, and economic development in the region.

This report summarizes the feedback gathered from stakeholders during the workshop, which was based on a comprehensive Policy Review and Gap Analysis report. Participants included representatives from government, private sector, financial institutions, farmers' associations, and research institutions.

The workshop's objective was to discuss the findings and co-create solutions to enhance the sustainability of Circular Food Systems in Tanzania, while fostering collaboration and innovative policy development.

1.1 About the report

This report is divided into four chapters. Chapter 1 provides the background of the Circular Food Systems (CFS) project as well as the scope and objectives of the project. Chapter 2 highlights literature review findings; Chapter 3 provides discussion and emerging issues; Chapter 4 consists of conclusion and recommendations.

1.2 Background

Ms. Sethimbile Mwamakamba, the Director of Policy Research at FANRPAN, presented the project background by outlining the connection between the circular economy and food security. She emphasized that food insecurity is one of the world's most pressing challenges, and adopting a circular economy offers a strategic way to address it. This approach enhances food security by focusing on three key dimensions: environmental protection, social development, and economic growth.

Ms. Mwamakamba further highlighted that, beyond improving food security and sustainability, the circular economy facilitates a waste-to-resource mechanism. This process extends the life cycle of products and materials, promotes agricultural innovation, creates new jobs, and helps regenerate natural capital.

The project aims to demonstrate that circular food systems can decouple social and economic growth from the consumption of natural resources, particularly water and land, and from the production of greenhouse gas emissions in agriculture. By creating local opportunities for women and youth, the project also seeks to reduce urbanization pressures. Additionally, the project will test how smallholder irrigation schemes can become engines of local resilience and economic development by integrating with livestock and dryland agricultural farming. This supports the strategic and inclusive development of small value-adding businesses to establish climate-smart food systems in Eastern and Southern Africa.

Ms. Sethimbile Mwamakamba further elaborated on the genesis of the CFS project. She explained that in 2013, the Transforming Irrigation in Southern Africa (TISA) project was launched in Tanzania and Mozambique to transform dysfunctional irrigation schemes into profitable systems. The TISA initiative laid the groundwork by enhancing irrigation scheme functionality and fostering community collaboration. However, the potential to integrate these advances with broader agricultural sectors remained largely untapped. The CFS project is now seizing this opportunity by integrating functional and profitable irrigation schemes with dryland cropping and livestock.

She also noted that the project is funded by the Australian Government through the Australian Centre for International Agricultural Research (ACIAR) and led by the Australian National University. Collaborating partners include FANRPAN, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Ardhi University (ARU), Universidade Eduardo Mondlane, and the National Institute of Irrigation (NIR) in Mozambique. FANRPAN's implementing partners, the country nodes, include the Economic and Social Research Foundation (ESRF) in Tanzania, which presented on the status of CFS in Tanzania today. Similar presentations were made by the Agriculture Research Council (ARC) in Zimbabwe last week, and next week, stakeholders from Mozambique will convene with Universidade Eduardo Mondlane as hosts.

1.3 Scope of the study and Objectives

Ms. Sethimbile highlighted that the study focuses on three East African countries (Tanzania, Ethiopia, and Kenya) and three Southern African countries (Malawi, Mozambique, and Zimbabwe). Currently, the pilot phase is underway in Zimbabwe, Mozambique, and Tanzania. While the project is implemented similarly across these countries, differences exist in the types of crops grown, the size of irrigation schemes, and the dynamics between local communities, governments, and other administrative levels.

She outlined the project's three key objectives:

1. Identify the conditions necessary for establishing successful circular food systems centered on irrigation schemes for smallholder farming communities.
2. Develop approaches to enhance gender equality and social inclusion in CFS and local food systems, improving food security and livelihoods.
3. Assess whether CFS can decouple resource use from socio-economic growth while fostering resilient communities and low-emission agriculture.

Ms. Sethimbile also presented the intervention framework, detailing the flow from inputs and activities to outputs and outcomes. She emphasized that the research strategy is designed to support development in a changing climate, focusing on three key questions:

- What conditions enable the successful establishment of circular food systems centered on smallholder irrigation schemes?
- How has the approach to local food system development improved gender equality, social inclusion (including youth and disability), food security, and livelihoods?
- To what extent can CFS decouple resource use from socio-economic growth, foster resilient communities, and promote low-emission agriculture?

These questions aim to deepen understanding of how circular food systems can enhance the resilience of farming communities to climate change in Eastern and Southern Africa.

She concluded by stressing the importance of the first research question, as it seeks to:

- Identify CFS interventions that can enhance the agricultural value chain and are likely to be sustainable and scalable.
- Determine whether successful CFS interventions can drive governments to adopt supportive policies for broader implementation.

2.0 Highlights of the Literature Review Findings

Ms. Teresia Mruma presented the report on Policy Review and Gap analysis report, highlighting key findings from the literature review.

While Tanzania is generally food self-sufficient at the national level, a significant portion of the population, especially the poor and marginalized, experiences prolonged food scarcity due to several factors:

- **Post-Harvest Losses:** Inadequate storage and transportation facilities lead to significant post-harvest losses. The country loses between 30 and 40 % of its harvested crops, primarily as a result of inadequate storage and transport facilities affecting food security and farmer's incomes.
- **Limited Infrastructure:** The agricultural sector lacks sufficient food processing infrastructure, hindering value addition and market access.

- **Inefficient Waste Management:** Poor waste management practices contribute to environmental degradation and the loss of valuable nutrients that could otherwise be recycled into the food system.
- **Climate change:** Erratic weather, droughts, rising temperatures, and pests are reducing crop yields and causing economic losses.

Despite the challenges, Tanzania is making progress, as several national policies reflect a multidimensional approach to agricultural development, food security, and economic empowerment, though with varying degrees of alignment with Circular Food Systems (CFS) principles. These policies emphasize sustainability, inclusivity, and climate resilience, but there are still notable gaps and opportunities for better integration of CFS into existing frameworks

Strength/ Alignment with CFS

- **Policy Frameworks/ Programs Supporting Sustainable Practices:**

Policies such as the National Agricultural Policy (NAP) 2013 and the National Multisectoral Nutrition Action Plan (NMNAP II) 2021-2026 promote sustainable agricultural development, food security, and efficient resource use. Along policies there are programs such as Comprehensive Africa Agriculture Development Programme (CAADP)/ Tanzania Agriculture and Food Security Investment Plan (TAFSIP) whose focus is on sustainable land and water management, market access, and food supply all these align well with CFS principles

- **Focus on Inclusivity and Community Involvement;**

The Tanzanian government recognizes the significance of economic empowerment for all citizens, particularly women, youth, and people with disabilities. To this end, it has implemented various initiatives aimed at reforming and amending financial policies, acts, and regulations to create a more inclusive environment for youth and women in agribusiness, which can foster more inclusive and resilient food systems. These include; “Building a Better Tomorrow”: Youth Initiative for Agribusiness (BBT-YIA) Program; Public Procurement Act of 2016; the National Microfinance Policy 2017; The Agriculture Sector Development Program ASDP I & II (2007/2008-2013/2014 & 2007/2008-2013/2014)

- **Emphasis on Water Management and Irrigation:**

The National Irrigation Policy (2009) and National Water Policy (2002) promote efficient water use and irrigation development, essential for sustainable agricultural productivity and aligning with CFS principles of resource optimization.

- **Environmental Protection and Sustainable Land Management**

Policies like the National Environment Policy (2021) and Tanzania Land Policy (1997) focus on sustainable land and environmental management, indirectly supporting the objectives of CFS by promoting practices that minimize environmental impact.

Weakness/ Divergence from CFS

- **Lack of Explicit CFS Integration:**

Many policies do not explicitly mention or integrate Circular Food Systems principles, such as the National Irrigation Policy (2009) and Agricultural Sector Development Program (ASDP II), National Water Policy 2002, National Agricultural Policy (NAP) 2013, and National Environment Policy 202. These limits the direct promotion of circular practices.

- **Implementation Gaps:**

There are discrepancies between policy formulation and implementation, with challenges in enforcement and resource allocation, which hinder the effective application of CFS principles.

- **Inadequate Financial and Technical Support:**

Policies like the National Microfinance Policy (2017) highlight financial inclusion but do not fully address the specific financial and technical needs for implementing CFS at a broader scale.

1.0 Discussion and Emerging Issues

The following issues emerged during the presentation;

- **Limited Awareness of Circular Economy:** The concept of a circular economy is not widely known in the country, leading to a lack of active implementation. This is evident by the high post-harvest losses.
- **Food Security for Key Players:** The project should address food insecurity not only for the general population but also for small farmers and small food processors, who are crucial players in a circular economy. Ensuring their food security is essential for a successful circular economy implementation.
- **Integration of the Livestock Sector:** The presentation rightly highlights the importance of including the livestock sector within the circular economy framework. This sector has previously been neglected.
- **Holistic Policy Approach:** A circular economy requires comprehensive policies that integrate all stages of the food system value chain. This includes production, processing, manufacturing, distribution, marketing, consumption, and waste management. A well-integrated approach will yield better results.
- **Clarifying Livestock Issues:** The presentation should provide a clearer explanation of the challenges faced by the livestock sector. This sector plays a significant role in the food system, especially as a source of protein.
- **Raising Awareness for Small-Scale Farmers:** Many small-scale farmers lack awareness about integrating livestock with crop production. The project should invest in initiatives to raise awareness on this topic, particularly in areas with irrigation schemes.
- **Promoting Integrated Farming:** The presentation should emphasize the benefits of integrated farming systems where crops and livestock are raised together. This practice is often neglected by small farmers and has the potential to improve overall productivity.
- **Strengthening Market Access:** The presentation focuses more on production, consumption, and waste management, neglecting the crucial aspect of market access within the circularity concept. More emphasis should be placed on food distribution and marketing to connect producers with consumers effectively.

4.0 Conclusion and Recommendations

The following conclusions and recommendations were provided by the participants

- **Increased Technological Investment for Post-Harvest Loss Reduction:** More effort needs to be directed towards technology to address the issue of post-harvest loss. This could involve research and development of improved storage facilities, packaging materials, drying techniques, and transportation solutions.
- **Stakeholder Engagement for Successful Circular Economy:** Stakeholder engagement is vital for the success of a circular economy. This includes collaboration between government agencies, research institutions, NGOs, farmer cooperatives, private sector players, and financial institutions.
- **Scaling Up Innovative Practices:** The presented holistic agriculture programs appear very innovative. If implemented effectively, they can significantly contribute to achieving a circular economy in the country. Strategies for replicating and scaling up these programs across different regions should be developed, considering local contexts and farmer needs.
- **Investment in Awareness and Scalability:** The concept of circularity is still in its early stages of development in the country. More investment is needed in creating awareness about its benefits and in capital investments for technologies that support its scalability across all functioning irrigation schemes in Tanzania.
- **Empowering Small-Scale Farmers and Processors for Food Security:** Small-scale farmers and small food processors should be empowered to ensure their food security. This can be achieved through capacity building programs to equip them with the knowledge and skills necessary for circular practices, and through financial support mechanisms such as microloans, grants, and subsidies.
- **Market Development for Growth:** Policies should be put in place to ensure markets for agricultural produce are readily available. This will stimulate production and growth for small-holder farmers by connecting them with reliable markets for their circular economy products.

Appendices

Appendix 1. Workshop Participants from Tanzania

First Name	Last Name	Email	Country	Organization
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Appendix 2: Program for Virtual Workshop on Policy Review and Gap Analysis for Circular Food Systems in Tanzania

TIME-FRAME	ACTIVITY	DESCRIPTION
5 MINUTES	Introduction	Mr. James Kasindi ESRF
5 MINUTES	Welcoming Note	Mr. Richard Ngilangwa ESRF
5 MINUTES	Background of the Project	Miss. Sethimbile Mwamakamba FARNPAN
20 MINUTES	Presentation on Policy Review and Gap Analysis for Circular Food Systems in Tanzania	Ms. Teresia Mruma ESRF
30 MINUTES	Discussion Q&A	ALL
5 MINUTES	Closing remarks	Mr. Richard Ngilangwa/ Ms. Teresia Mruma ESRF