



EDUARDO MONDLANE UNIVERSITY
CENTRE OF EXCELLENCE IN AGRI-FOOD SYSTEMS AND NUTRITION
IN PARTNERSHIP WITH HIGHER POLYTECHNIC INSTITUTE OF GAZA (ISPG) AND
HIGHER POLYTECHNIC INSTITUTE OF MANICA (ISPM)

CALL N° 06/2025

June 16th, 2025

CALL FOR SUBMISSION OF PROPOSALS:
COMUNITY ACTION RESEARCH PROJECTS (CARP-E) FOR ENTERPRISE CREATION,
INCUBACTION AND BUSINESS SPIN-OFFS

Title: Inclusive Cereals Production and Integration of Alternative Protein Sources, Value Addition, and Commercialization for Food and Nutrition Security in Mozambique

1. Background

Mozambique is endowed with substantial agricultural potential, including a wide range of agroecological zones with favorable tropical climate, and strategic access to regional and international markets through its extensive coastline and trade corridors (FAO, 2021¹; World Bank, 2023²). However, the country continues to face significant and persistent challenges in achieving food and nutrition security. According to the Global Hunger Index (2022)³, a considerable proportion of Mozambique's population remains food insecure, with chronic

1 FAO. (2021). Mozambique Country Programming Framework 2022–2026.

2 World Bank. (2023). *Mozambique Agriculture Sector Review*. <https://www.worldbank.org/en/country/mozambique>

3 Global Hunger Index. (2022). *Mozambique Profile*. <https://www.globalhungerindex.org>

malnutrition; particularly among children under five and women of reproductive age remaining alarmingly high (WFP, 2022)⁴.

Staple cereals such as maize, sorghum, and millet form the dietary foundation for the majority of the rural population. Yet, cereal production is largely subsistence-based, characterized by low productivity, minimal adoption of improved seeds and fertilizers, and inadequate access to extension and advisory services (IFPRI, 2021)⁵. Smallholder farmers who dominate Mozambique's agriculture sector continue to face numerous constraints, including the high cost of quality inputs, limited mechanization, and weak market linkages. Postharvest losses remain high due to poor handling practices, limited processing infrastructure, and insufficient storage facilities, which collectively undermine food security and farmer incomes (AGRA, 2022)⁶.

Recently, the country has experienced major shifts in its demographic and socioeconomic landscape. Rapid population growth, urbanization, and rising incomes in urban and peri-urban areas have led to changes in dietary preferences, with increasing demand for more diverse, convenient, and protein-rich foods (FAO, 2020)⁷. This changing food landscape provides an opportunity to diversify and modernize the country's food systems through the integration of alternative and underutilized protein sources.

Emerging value chains in alternative proteins, such as edible insects (e.g., black soldier fly larvae), aquatic species (e.g., snails, frogs, and freshwater shrimp), and plant-based protein crops (e.g., legumes and soy derivatives), are gaining recognition for their nutritional, environmental, and economic benefits. For example, black soldier fly farming is increasingly recognized for its high feed conversion rates and potential to recycle organic waste into protein-rich animal feed, contributing to circular economy principles (van Huis et al., 2020)⁸. These systems offer sustainable solutions to food and feed insecurity while mitigating environmental degradation and supporting income diversification.

However, despite these promising developments, Mozambique's agri-food systems remain structurally weak. The integration of staple cereal production with emerging protein sources into cohesive commercial value chains is still limited. Investment in local food processing and value addition remains insufficient, particularly in rural and peri-urban areas. Small and medium agri-enterprises, especially those led by youth and women, continue to face systemic barriers namely

4 WFP. (2022). Mozambique Country Strategic Plan 2022–2026. World Food Programme.

5 IFPRI. (2021). Africa Agriculture Outlook: Challenges and Opportunities. International Food Policy Research Institute.

6 AGRA. (2022). Africa Agriculture Status Report 2022: Building Resilient Food Systems.

7 FAO. (2020). *Changing Food Systems in Urbanizing Africa: Mozambique Case Study*.

⁸ Van Huis, A., et al. (2020). *Edible Insects: Future Prospects for Food and Feed Security*. FAO Forestry Paper

limited access to finance, land, technology, and market information, these barriers hinder this category of people ability to scale operations or innovate (UN Women, 2020⁹; AfDB, 2021¹⁰).

Women and young people constitute the backbone of Mozambique's agricultural labor force, yet often lack decision-making power, control over productive resources, and access to entrepreneurial support systems. This gender and generational exclusion impair the sector's overall growth and resilience, particularly in the face of climate change, market volatility, and food system shocks (World Bank, 2022)¹¹.

Furthermore, there is a critical gap in integrated approaches that simultaneously address agricultural productivity, nutrition security, environmental sustainability, and inclusive rural development. Most interventions remain siloed, failing to capture the synergies between improving food access, empowering marginalized groups, and building climate-resilient agri-food systems.

In light of these challenges and opportunities, this call for proposals seeks innovative, scalable, and inclusive solutions to strengthen staple cereal production, commercialize emerging protein value chains, and develop value-added processing enterprises that contribute to resilient and sustainable food systems in Mozambique.

This call aims to develop or strengthen existing enterprises that:

- Increase local cereal production, productivity, and market competitiveness through improved technologies, better access to inputs, and strengthened postharvest systems.
- Promote and commercialize alternative protein sources aligned with evolving dietary preferences, nutritional needs, and environmental sustainability.
- Address food and nutrition insecurity through cost-effective, gender-responsive, and nutrition-sensitive innovations that benefit the most vulnerable populations.
- Foster inclusive and environmentally sustainable agribusiness models that support women, youth, and marginalized communities as central agents of change.
- Translate research outputs and innovative practices into viable, community-based enterprises and small-scale industries to expand employment and income-generating opportunities.

This call for proposal envisions a transformative pathway for Mozambique's food systems that combines productivity, inclusivity, and resilience to achieve long-term food and nutrition security, economic empowerment, and sustainable rural development.

⁹UN Women. (2020). *Gender and Agriculture in Mozambique: Gaps and Policy Options*.

¹⁰AfDB. (2021). *Catalyzing Agribusiness Investment in Africa*. African Development Bank.

¹¹World Bank. (2022). *Youth and Jobs in Mozambique: Opportunities and Challenges*.

2. Thematic Areas

Thematic Area 1: Cereal Grains Production, Value Addition and Commercialization

Cereal grains such as maize, sorghum, and millet are the cornerstone of Mozambique's food security, providing the primary source of calories for the majority of the population, particularly in rural areas. However, the sector faces significant challenges, including low productivity, postharvest losses, limited value addition, and weak market linkages. This thematic area seeks to address these gaps by fostering innovative, scalable, and commercially viable enterprises that enhance cereal production, improve processing technologies, and strengthen market systems. The goal is to transform subsistence-based farming into profitable agribusiness ventures that contribute to food and nutrition security while empowering smallholder farmers, women, and youth.

This theme focuses on the transformation of staple cereals (e.g., maize, sorghum, millet) through:

- Developing one or more enterprises that will improve access to affordable, high-quality seed;
- Establish business using Cost-effective mechanized processing technologies (e.g., for fortified flour, cereal oils);
- Business models that boost enterprise profitability for smallholder farmers and agro-processors.

Thematic Area 2: Alternative Protein Sources and Emerging Value Chains

Mozambique's food systems are undergoing a transformation driven by urbanization, shifting dietary preferences, and the need for sustainable nutrition solutions. While traditional protein sources like fish, meat, and legumes remain vital, climate change, population growth, and economic constraints demand diversification. This thematic area focuses on commercializing underutilized and emerging protein sources such as edible insects, aquatic species (e.g., frogs, snails, freshwater shrimp), and plant-based proteins to enhance food security, improve nutrition, and create income-generating opportunities

As food preferences evolve, so do opportunities for diversification. This theme welcomes proposals on:

- Establish a business that will commercialize of underutilized or emerging proteins (e.g., frogs, snails, shrimps);
- Establish a business that will use insect-based protein innovations (e.g., black soldier fly farming for animal feed);
- Models that link alternative protein value chains to urban and rural markets.

Thematic Area 3: Climate-Smart Cereal and Protein Production Systems

Mozambique's agricultural systems face escalating threats from climate change, including erratic rainfall, prolonged droughts, and increased pest pressures. These challenges disproportionately affect smallholder farmers who rely on rain-fed cereal production and traditional livestock for protein. This thematic area seeks innovative, climate-resilient solutions that integrate cereals (maize, sorghum, millet) and alternative protein sources (insects, legumes, aquatic species) into sustainable production systems.

To build resilience and sustainability, this theme supports innovations in:

- Climate-smart farming practices for cereals and alternative proteins;
- Efficient water and land management strategies;
- Agroecological and circular economy models for minimizing environmental impact.

Thematic Area 4: Inclusive Financing and Market Systems for Agri-Nutrition

Mozambique's agricultural sector suffers from chronic underinvestment, with smallholder farmers - particularly women and youth - facing systemic barriers to financial services and market access. This thematic area addresses the critical nexus between finance, markets, and nutrition by supporting innovative enterprises that:

1. Democratize access to capital for underserved groups
2. Strengthen market linkages for nutritious food value chains
3. Create enabling ecosystems for agri-nutrition businesses to thrive

To enhance viability and scale:

- Provide services to link youth and women-led enterprises to financing opportunities.
- Provide services to small farmers to access finance
- Establish a business providing digital and community-based market linkage platforms

The persistent financing gap in Mozambique's agriculture exceeds \$1 billion annually (AfDB, 2023), while post-harvest losses of nutrient-dense crops remain alarmingly high due to weak market infrastructure. This call specifically targets solutions that can transform these challenges into opportunities for inclusive growth.

Thematic Area 5: Food Safety, Standards, and Consumer Awareness

This thematic area addresses critical gaps in food safety systems, quality standards compliance, and consumer education - particularly for emerging value chains in alternative proteins and fortified cereal products. With increasing urbanization and dietary shifts, building trust in novel and traditional foods through robust safety mechanisms and awareness campaigns becomes paramount for public health and market development.

As food systems diversify, consumer trust and public health must be ensured:

- Innovations in food safety assurance for cereals and new protein sources;
- Awareness campaigns to promote nutrient-rich diets and novel protein acceptance;
- Establish an enterprise that assists rural women and youth to meet Local standards and certification systems for processed and alternative foods.

Thematic Area 6: Post-Harvest Processing and Value-Added Product Development

This theme focuses on enterprises reducing post-harvest losses and enhancing the value of cereals and alternative proteins through processing and product development. Proposals should develop scalable solutions for processing, packaging, and marketing value-added products. Proposals may include:

- Small-scale processing units for fortified cereal products or protein-rich snacks;
- Sustainable packaging solutions to extend product shelf life;
- Branding and marketing initiatives targeting urban and rural consumers.

Thematic Area 7: Policy and Institutional Support for Inclusive Agri-Food Systems

This theme emphasizes advocacy and institutional innovations to create an enabling environment for cereal and alternative protein value chains. Proposals should collaborate with policymakers to develop supportive policies and foster partnerships. Proposals may include:

- Research and advocacy for policies supporting inclusive value chains;
- Streamlined regulatory processes for small-scale processors and producers;
- Public-private partnerships to scale enterprise models.

3. Who should apply

This call invites faculty members (Principal Investigators, Lecturers and researchers) from Eduardo Mondlane University (UEM), Higher Polytechnic Institute of Manica (ISPM), and Higher Polytechnic Institute of Gaza (ISPG) to submit proposals that align with the thematic areas outlined above.

4. Application Requirements:

- Be a Principal Investigator, Lecturer or Researcher of UEM, ISPM and ISPG.
- Technical and financial proposal: Refer to Annex 1.
- Curriculum Vitae.

5. Schedule of Activities

Table 1. Schedule of Activities

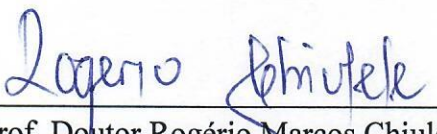
Activity	Period/Date
Submission of proposals	16 to 30 June, 2025
Evaluation and Selection	1 ST to 3 rd July, 2025
Publication of results	July 4 th , 2025
Implementation period	July to December 2025

6. Budget

- Each selected project will receive funding of up to USD 15,000.

Application documents must be submitted to the following email address: dir.ceafsn@uem.mz by June 30th, 2025. The same email can be used for further details or additional information about the process. Details regarding the terms of reference and application forms can be accessed in the following website: www.ceafsn.uem.mz.

The Director of CE-AFSN


(Prof. Doutor Rogério Marcos Chiulele)

ANNEX 1:

1. CARP-E application form
2. Entrepreneurs/start-ups application form and with the Costing Excel.

Available in www.ceafsn.uem.mz