EDUARDO MONDLANE UNIVERSITY

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

CALL Nº 05/2025

June 16th, 2025

CALL FOR SUBMISSION OF PROPOSALS:

COMUNITY ACTION RESEARCH PROJECTS (CARP-E) FOR ENTERPRISE CREATION, INCUBACTION AND BUSINESS SPIN-OFFS

Title: **Advances in Last Mile for Closing the Productivity and Commercialization Gaps in Diverse Value Chains in Mozambique**

1. Background

Agriculture, including livestock and crop production, is the backbone of Mozambique's economy, sustaining the livelihoods of nearly 70% of its rural population and contributing significantly to food security and local economies (FAO, 2021)[1]. Despite its potential, the agricultural sector faces persistent productivity and commercialization gaps, particularly in diverse value chains such as livestock, poultry, dairy, and horticulture. These gaps are most pronounced in the "last mile" of service delivery and market access, where smallholder farmers struggle to connect with inputs, services, and profitable markets.

[1] FAO (2021). *Livestock sector in Mozambique: Opportunities and constraints*. Rome: Food and Agriculture Organization of the United Nations.

Key constraints include limited access to quality inputs like seeds, fertilizers, and veterinary supplies, which are often costly and unavailable in remote areas (IFAD, 2020)[2]. Inadequate extension services and market information further hinder farmers' ability to adopt improved practices and negotiate fair prices. Weak infrastructure, such as poor road networks and lack of cold chain facilities, exacerbates post-harvest losses and restricts access to urban or regional markets (World Bank, 2022)[3]. Women and youth, who play critical roles in agricultural value chains, face additional barriers, including limited access to finance, land, and market networks, which undermines inclusivity and growth (CARE, 2019)[4]. Climate variability, including droughts and floods, adds further challenges by disrupting production and supply chains (USAID, 2021)[5].

Innovative last-mile solutions offer transformative potential to bridge these gaps. Digital platforms, such as mobile apps and SMS-based market information systems, can deliver real-time data on prices, demand, and best practices, empowering farmers to make informed decisions. Aggregation hubs and cooperative models can reduce transaction costs and improve smallholders' bargaining power in markets. Mobile input delivery systems and community-based distribution networks can enhance access to affordable, high-quality inputs in remote areas. Additionally, technologies like solar-powered cold storage and small-scale processing units can minimize losses and add value to products, strengthening commercialization (ILRI, 2020)[6].

This call for proposals seeks innovative, scalable, and inclusive last-mile solutions to close productivity and commercialization gaps in Mozambique's diverse agricultural value chains. Proposals should focus on enhancing access to inputs, services, and markets, fostering enterprise development, and promoting gender equity and climate resilience to drive sustainable rural development and improved livelihoods.

2. Thematic Areas

Thematic Area 1: Innovations for Last Mile Delivery of Agricultural Inputs and Services

This theme focuses on enterprises that leverage digital and hybrid technologies to bridge gaps between agricultural input suppliers, service providers, and smallholder farmers in remote areas. Proposals should prioritize cost-effective, scalable solutions that enhance the timely delivery of critical inputs (e.g., seeds, fertilizers, veterinary supplies) and services (e.g., extension support).

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[2] IFAD (2020). *Agricultural Sector Assessment Mozambique*. International Fund for Agricultural Development.
[3] World Bank (2022). *Mozambique Agriculture Public Expenditure Review*. Washington, DC: World Bank Group.
[4] CARE (2019). *Gender and Agriculture in Mozambique: A Policy Review*.
[5] USAID (2021). *Climate Risk Profile: Mozambique*. United States Agency for International Development.
[6] ILRI (2020). *Livestock and digital innovation: Emerging solutions for Africa*. International Livestock Research Institute.

Solutions should address logistical challenges, such as poor rural infrastructure, and demonstrate measurable improvements in access and affordability. Enterprise-driven solutions that include:

- Mobile platforms for scheduling and tracking last-mile input deliveries, integrated with local agro-dealer networks.
- GPS-enabled logistics systems to optimize delivery routes in rural Mozambique.
- USSD/SMS-based ordering systems for farmers with limited smartphone access.

Thematic Area 2: Enhancing Profitability through Digital Market Connectivity

This theme supports enterprises that develop digital tools to connect smallholder farmers and cooperatives to markets, improving price transparency, reducing post-harvest losses, and enhancing bargaining power. Proposals should focus on platforms that facilitate direct trade, secure payments, and integration with regional and global markets, particularly for high-value crops like cashew, sesame, or horticulture. Enterprise-driven solutions include:

- Mobile-based e-marketplaces linking farmers to buyers, including supermarkets and exporters;
- Blockchain-enabled traceability systems for organic or fair-trade certification, targeting export markets;
- Apps providing real-time price data and contract negotiation tools for cooperatives.

Thematic Area 3: Localized and Accessible Agricultural Information Systems

This theme seeks enterprises that deliver tailored, real-time agronomic and market information to farmers, overcoming linguistic, cultural, and technological barriers. Solutions should prioritize low-cost, accessible formats (e.g., SMS, IVR, or radio-digital hybrids) and focus on climate-resilient practices, crop-specific advice, and local market trends, particularly for underserved groups like women and low-literacy farmers. Enterprise-driven solutions that include:

- SMS-based crop calendars and climate alerts in local languages like Portuguese, Makhuwa, or Sena;
- Interactive Voice Response (IVR) systems delivering pest management advice in rural dialects;
- Radio-integrated apps enabling farmer feedback and localized content delivery.

Thematic Area 4: Smart Digital Advisory and Knowledge Platforms

This theme invites enterprises to develop or scale AI- and mobile-enabled platforms that provide personalized, real-time advisory services to farmers, agro-dealers, and extension workers. Solutions should address critical needs such as pest and disease management, soil health, input optimization, and financial planning, while being adaptable to Mozambique's diverse agroecological zones. Enterprise-driven solutions that include:

- AI-powered chatbots offering crop diagnostics and input recommendations.
- Mobile apps for integrated pest management and irrigation scheduling.

- Voice-enabled platforms providing financial literacy and loan access guidance.

Thematic Area 5: Promoting Digital Inclusivity for Women, Youth, and Marginalized Groups

This theme emphasizes enterprises that address the digital divide by designing inclusive solutions tailored to women, youth, and remote communities. Proposals should tackle barriers such as affordability, low digital literacy, and socio-cultural constraints through co-designed, user-centric tools and capacity-building initiatives. Enterprise-driven solutions that include:

- Gender-responsive mobile apps offering financial literacy and market access for women farmers;
- Youth-focused agritech incubators providing training and startup support;
- Offline-compatible tools for remote areas with limited internet connectivity.

Thematic Area 6: Integrated Data Systems for Value Chain Intelligence

This theme supports enterprises that develop data-driven solutions to provide actionable insights across the agricultural value chain, from production to consumption. Proposals should focus on systems that aggregate, analyze, and visualize data to support decision-making for farmers, cooperatives, businesses, and policymakers, with an emphasis on scalability and integration with national agricultural systems. Enterprise-driven solutions that include:

- Data dashboards combining weather, price, and yield analytics for cooperatives and policymakers;
- Predictive AI models for crop demand and supply chain optimization;
- Blockchain-based traceability systems for export-focused value chains like cashew or cotton.

Thematic Area 7: Community-Based Aggregation and Logistics Hubs

This theme focuses on establishing community-driven aggregation and logistics hubs to enhance last-mile delivery of agricultural products and inputs. Proposals should develop enterprises that consolidate produce, improve storage and transportation infrastructure, and reduce post-harvest losses, while fostering inclusive models that empower women, youth, and smallholder farmers. Proposals may include:

- Community-managed aggregation centers with solar-powered cold storage for perishable goods;
- Cooperative logistics networks providing affordable transportation for smallholder farmers;
- Enterprises offering training and microfinance for women and youth to operate aggregation hubs.

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 Title 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	1ST to 3rd July, 2025
Publication of results	July 4th , 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

Rogério Chiulele

(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