Investment Factsheet:

Facilitating access to maize processing

Maize is a crucial crop in Tanzania, especially in the Southern Highlands, including Sumbawanga. It accounts for **30% of the country's food production** and over **75% of cereal consumption**. Despite its importance, the maize value chain faces significant challenges, including weak connections between farmers, processors, and markets due to poor communication and lack of trust. The absence of local processing facilities further limits value addition and profit potential.

Problem statement

Addressing the **lack of maize processing opportunities** in Sumbawanga, especially in villages like Mpui, requires innovative solutions beyond traditional infrastructure. It is also crucial to plan production and value-addition infrastructure to align farmers' supply with market demand and connect farmers with processors to promote maize agro-processing.

Proposed action

Implementation of **maize processing machinery** and **cooperative ventures**. An appropriate machinery offers a cost-effective and flexible solution, allowing farmers to process maize locally without relying on industrial electricity or traveling long distances, thereby reducing transportation costs.

Additionally, forming **cooperative milling ventures** would enable small-scale farmers to pool resources, share equipment, and strengthen their bargaining power.

Investments needed

- **Estimated initial investment:** about USD 40,000 (costs include purchase of processing machines – complete milling and dehulling machine – and installation).
- **Average operating costs:** USD 1 million per year (costs include maintenance costs; wages for permanent employees and temporary workers; raw materials; and purchase of maize*).

* Estimates are based on an average purchase of 4 million kg of maize per year.

Potential areas to be implemented

Villages of Mpui, Laela, Ikonzi, Kalambazite and Kaengesa.

Potential beneficiaries:

- **Producers/Farmers/Processors**: Mpui AMCOS, Mbala AMCOS, Ikonzi AMCOS, Kamawe AMCOS.
- **Buyers**: Msama Food, Landoni and WFP.

Partnerships for success: TADB (financing), TPB Bank PLC. (financing), Equity Bank Tanzania (financing), Mpui Saving and Credit Co-operative Society Limited (financing), USADF (financing); Rural Urban Development Initiatives (RUDI) (training), Building Rural Incomes Through Enterprise (BRiTEN) (training), Farm Concern International (FCI) (facilitator), Nelson Mandela African Institution of Science and Technology (NM-AIST) (facilitator), Farm Radio International (FRI) (Communicator), Centre for Sustainable Development Initiatives (CSDI) (Capacity builder), Alliance for a Green Revolution in Africa – AGRA (collaborator).

Expected benefits

Farmers' income from flour sales (assumptions: 75% of total maize (4M kg) is converted into flour, USD 0.38 /kg maize flour) **(USD 1.15 M per year).** This represents 91% of total expected benefits.

Expected **economic saving** in terms of energy, transport, electricity, etc. (local knowledge) **(3,800 USD/year).**

New incomes for farmers from the sale of maize bran after hulling and milling (assumptions: 25% of total maize (4M kg) is assumed to be maize bran, sold at a price of USD 0.11/kg) (**115,000 USD/year).**

Financial:

	2026-2030	2026-2035	2026-2050
Total present Costs (USD)	4,553,252	8,857,315	20,589,435
Total present Benefits (USD)	4,626,976	10,160,401	25,243,547
Financial Net present value (FNPV) - (USD)	73,724	1,303,086	4,654,112
Financial Rate of Return (FRR) - %	7%	27%	31%
Benefit-Cost Ratio (BCR)	1.02	1.15	1.23

Break-even point: in **Year 5** the initial capital investment is overpassed, and revenues start to be higher than costs, being the net cash flow of that year: **USD 187,298**.

Environmental:

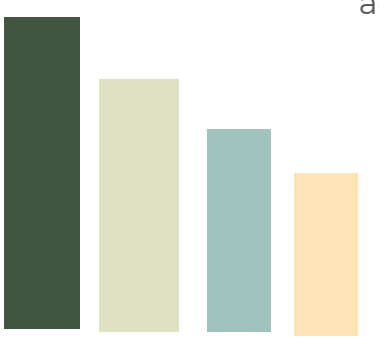
It reduces waste generation, and the negative impact associated with its disposal (CO_2 emissions linked to burning process).

Social:

Provides small-scale farmers with affordable, shared access to maize processing technology. Promotes collective and inclusive ownership and improves farmers' bargaining power.

Foster maize processing demonstrates short-term **profitability**, which is further increased through the commercialization of processing residues for downstream applications.

Potential for success



- Alignment with the Agriculture Strategy Development Plan, which promotes adding value to crops grown and reducing post-harvest losses.
  - Community involvement in decision-making ensures transparency and shared governance.
    - Fostering the cooperative model strengthens farmers' bargaining power and improve profit margins.
      - Training and knowledge sharing through cooperatives enhance sustainable practices and financial management at no extra cost.

Opportunities for enabling NbS investments

A suite of successful climate-resilient practices already implemented in some regions of Tanzania include:

- **Push-Pull Technology,** using *Desmodium* as a repellent intercrop and Napier grass as a trap crop to control stemborers and Striga.
- **Basalt rock dust** for soil remineralization.
- **Conservation Agriculture techniques** such as no-till and crop rotation.
- The **integration of nitrogen-fixing trees** like *Moringa* enhances soil fertility and farm multifunctionality.
- **DroughtTEGO hybrid maize** offers improved yields under drought stress, contributing to food security and system resilience.