CTCN TECHNICAL ASSISTANCE AND FINANCE LINKAGES IN MALI

Design and financing for crop drying and storage technologies to strengthen food security in the face of climate change

Focus: Adaptation and Mitigation

The **Action Group for Modernisation of Agriculture (GAMA)** in Southern Mali together with the **Mali Folk Center**; and **Ministry of Agriculture and Ministry of Environment** requested support from the CTCN through their NDE to address the technical and financial barriers faced in implementing the use of renewable energy sources for drying, processing and storing technologies for mangoes, potatoes and gombo.

The Objective:

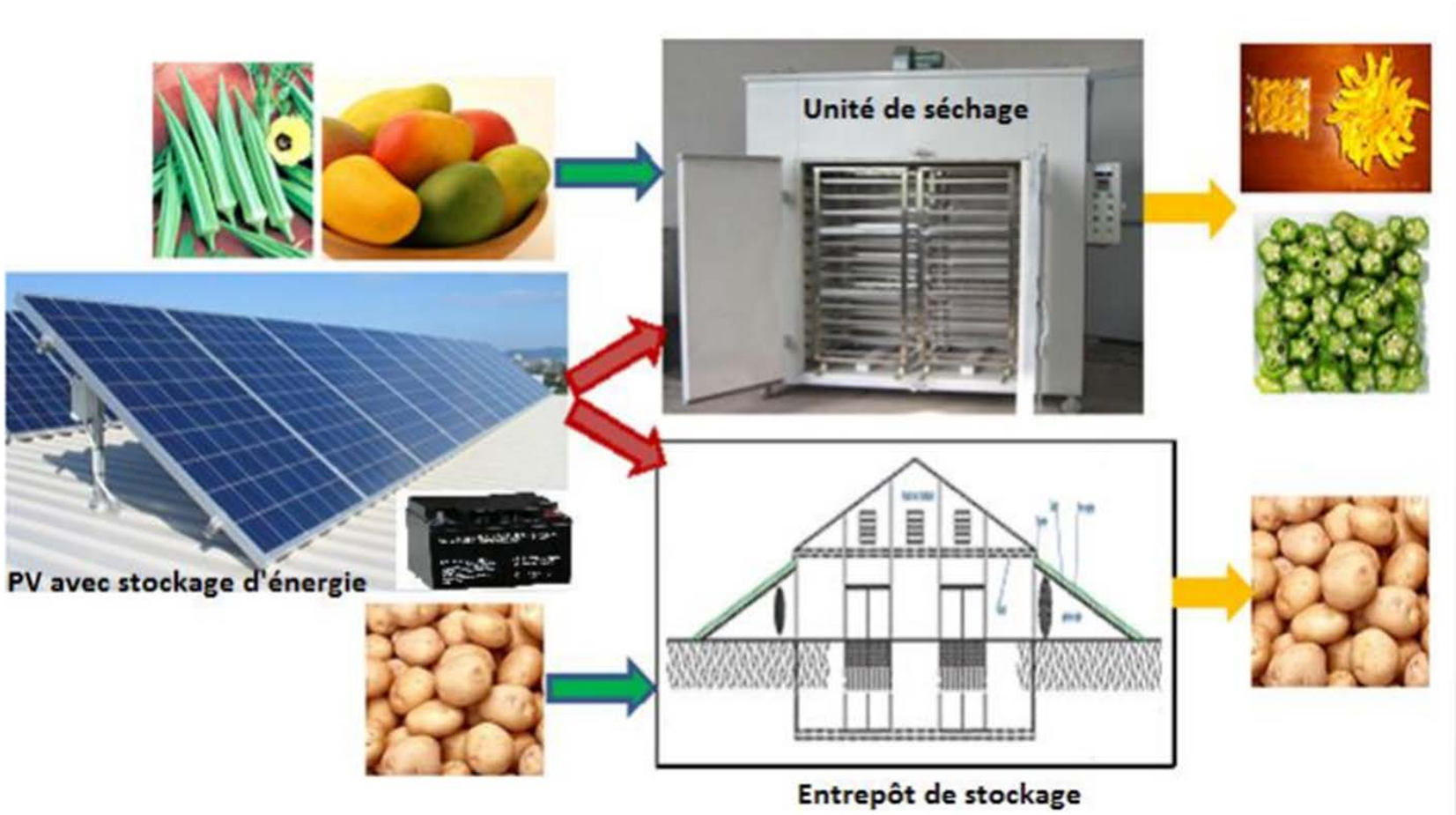
1. Store the potato to supply the markets interiors over longer periods
2. Dry the mango for export and okra for local and regional markets
3. Build capacity to secure financing for the necessary technologies

The CTCN and partners, the Private Financing Advisory Network (PFAN) and Environment and Development Action in the Third World (ENDA), provided the following technology assistance in Mali:

- Recommendations on appropriate technology options to store and dry mangos, potatoes and gombo
- Finalization of a business plan and related documents
- Development of a cash flow model
- Production of an independent feasibility audit to support investment decisions
- Provision of coaching and support of project members such as training on investor negotiations and facilitation of investor meetings

Selected technologies:

- Semi industrial unit for drying: Industrial dehydrators with a capacity of 400 kg of mango fresh (energy requirement 50 kw)
- A warehouse of 900 storage tons: A building equipped with heat pumps, system ventilation, dehumidifiers, temperature sensors and humidity and their systems of orders (requires 15 kw)
- A source of energy: a photovoltaic solar power station of 80 kW with a bank of storage batteries and electronic power interfaces

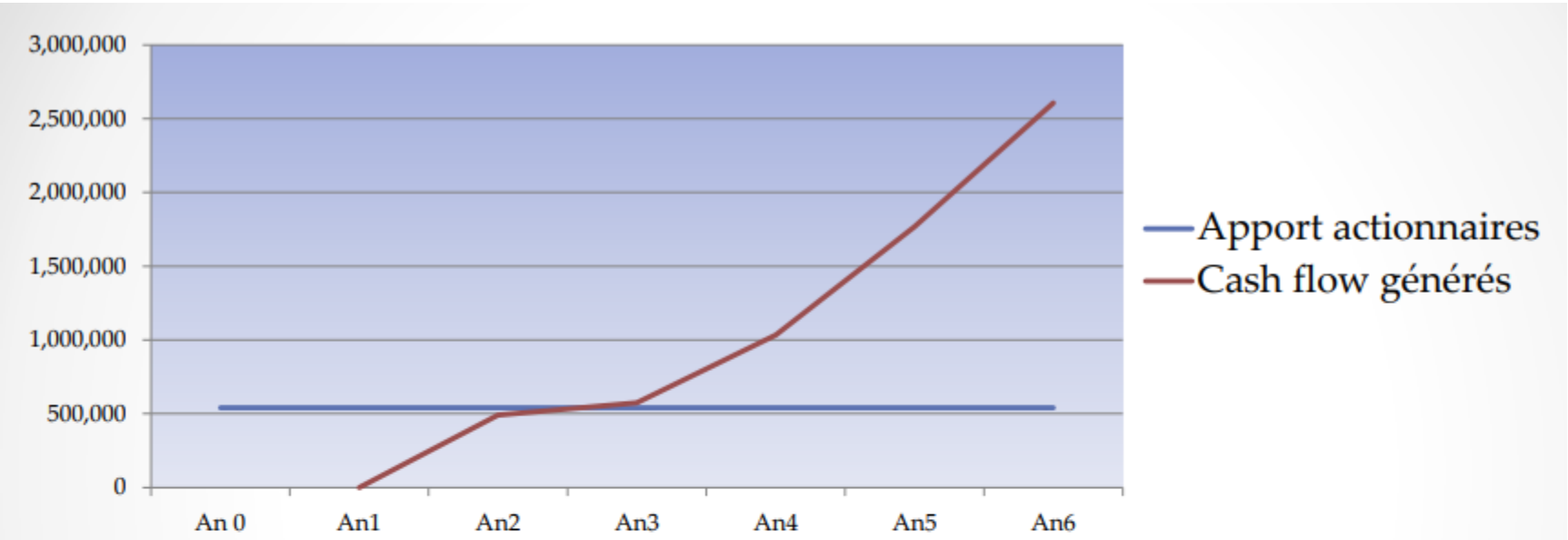


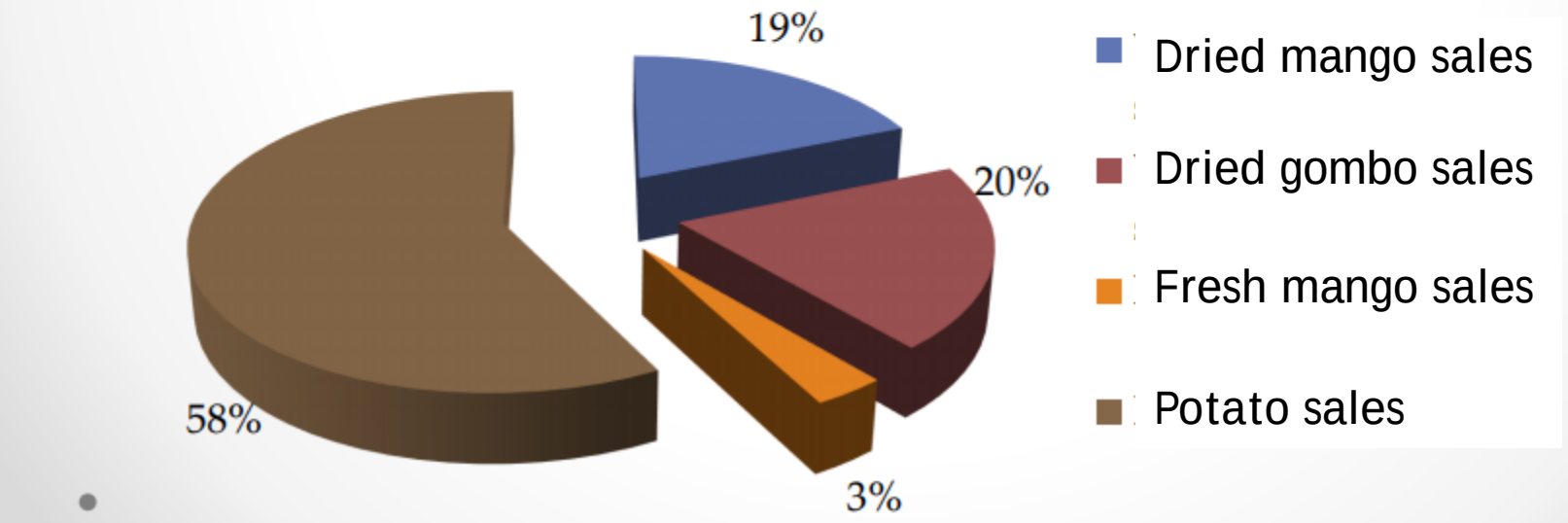
To produce, store or transform on an industrial scale, it requires a reliable source of energy and economically profitable.

The new model guarantees:

- Energy security
- Controlled operating costs (efficiency): 56 million saving compared to conventional gas or generator
- High yields (efficiency): production time reduced by 19 hours - 400 kg of dried mango per day
- More elaborate products
- Diesel fuel economy: savings of 95,340 liters of diesel, representing 274,579 kg of CO2

Availability of cash flows and sources of earnings





Results:

- Profitable project with 191,615 USD profit from the beginning first year
- Attractive interest rate with repayment term short
- Exit plan limiting the risks for the partner financial
- High potential for expansion
- Very ecological model

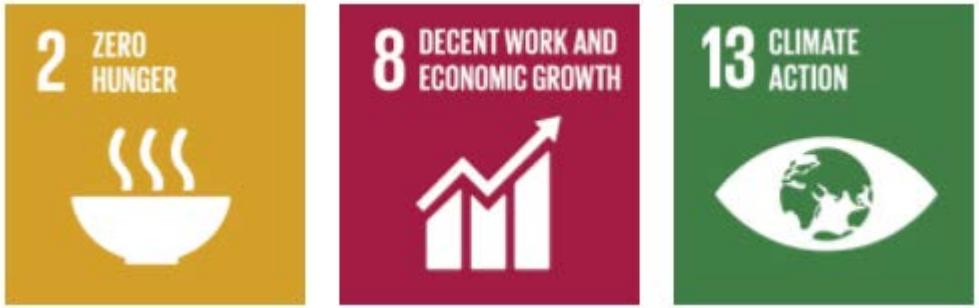
Other benefits:

- 19 permanent jobs and about 40 jobs seasonal created (60% women)
- More than 100 million FCFA injected per year into the economy local
- Promotion of an innovative industrialization model
- Local farmers will have access to the market at a good price

This technology and finance collaboration contributes toward Mali's **Nationally Determined Contribution** to:

- give "Priority to develop a smart and resilient agriculture, including through the use of renewable energies".

The collaboration advances the following Sustainable Development Goals:



THANK YOU