Zimbabwe

Funded by the European Union

Technical Assistance: Piloting a Reliable Solar-Powered Drying Facility for Mopane Worms in Gwanda, Zimbabwe
Location: Gwanda Rural District, Zimbabwe
Solution: Solar-Powered Drying Facility for Mopane Worms
UNEP CTCN grant: USD 185,000

© UNEP-CTCN

Zimbabwe faces significant challenges in sustainably harvesting and processing mopane worms, a vital protein source. Traditional drying methods, which rely on firewood, contribute to deforestation and fuel shortages. As demand for mopane worms increases and firewood resources diminish, this project introduces solar-powered drying to preserve food, reduce environmental impact, and improve livelihoods. Set in Gwanda Rural District, this project will support local communities heavily reliant on mopane worms for food security and economic activity.

Objectives

The project aims to pilot a solar-powered drying facility to combat post-harvest losses of Mopane worms and reduce deforestation. By introducing this innovative technology, the project intends to support local communities by improving food security, creating jobs, and enhancing income for those involved in the Mopane worm value chain.

- **Climate Resilience**: Reduce reliance on firewood and deforestation by introducing a solar-powered drying facility for Mopane worms.
- **Food Security**: Ensure year-round food availability by reducing post-harvest losses of Mopane worms.
- **Capacity Building**: Train 120 direct beneficiaries in operating the solar drying facility, reducing dependence on external support.

Climate Impact

- **Reduced deforestation**: Solar drying eliminates the need for firewood, reducing deforestation in the area.
- **Sustainable harvesting**: Promotes better management and reduces overharvesting of Mopane worms.
- **Environmental protection**: Solar drying technology helps protect the ecosystem by reducing pressure on natural resources.

Security Benefits

- **Economic stability**: The project reduces dependence on unsustainable activities, such as illegal logging, by providing stable income through Mopane worm processing.
- **Community security**: By fostering income opportunities and reducing resource competition, the project helps mitigate local tensions and improve social stability.

Social Impact

- The project targets **vulnerable Mopane worm harvesting communities** in the Gwanda Rural District.
- It will directly benefit 130 individuals involved in the harvesting and trading of Mopane worms, many of whom are women and youth. Indirect beneficiaries include an additional 400 community members, including family members and local businesses, who will benefit from improved food availability, increased income, and enhanced economic opportunities.
- The project also aims to empower women and youth by providing them with skills and income-generating opportunities, thus contributing to long-term community resilience and social cohesion.

Food Security

- **Increased food preservation**: Solar drying significantly reduces post-harvest losses, improving the availability of food.
- **Improved nutrition**: Enhances food security by preserving Mopane worms, a key protein source, particularly during times of scarcity.

CS Climate Technology

- The project uses a solar-powered drying facility, which is climate-resilient, independent of firewood, and reduces post-harvest losses.
- It improves the quality and hygiene of food products while promoting environmental sustainability.
- The local community is participating with in-kind contributions through the construction of a building to house the equipment.

Replication Potential

- The solar-powered drying facility can be replicated in other regions of Zimbabwe and other countries facing similar challenges.
- The project's training programs will equip local communities to build and operate the systems independently, fostering local ownership and sustainability.

UN environment programme | CTCN UN Climate Technology Centre & Network

For more information, visit CTCN