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Olivier Asselin (FAO)

Resilient FOOD SYSTEMS

Reversing Land Degradation Trends and Increasing Food Security in Degraded Ecosystems (LDFS)

Tanzania

Resilient Food Systems is one of the three Integrated Approach Pilots funded by the Global Environment Facility. Implementation is led by the International Fund for Agricultural Development, in collaboration with 12 African countries and several regional partners. The five-year programme is committed to **fostering sustainability and resilience for food security in sub-Saharan Africa**.

As an integral part of this regional initiative, the **Reversing Land Degradation Trends and Increasing Food Security in Degraded Ecosystems** project in Tanzania is contributing to the collective impact of the Resilient Food Systems Programme.

Context

The project sites represent two of the country's main biomes, each encompassing different types of biological resources and unique diversity, namely the humid Miombo ecosystem and the Rift Valley Highland ecosystem. Land degradation, agricultural expansion, fires and unsustainable land use practices have resulted in significant degradation of flora and fauna, as well as the destruction of landraces in agriculture and livestock. This benefits foreign improved breeds, leading to a gradual degradation of native genetic material. According to the IUCN Red List, Tanzania is home to nearly 600 terrestrial species that are classified as vulnerable, of which 291 are endangered and 91 critically endangered.

Consequently, the land of the target districts in semi-arid areas is highly degraded, and the productive land is becoming increasingly scarce. Climate change is leading to prolonged dry spells, and farmers report increasing temperatures, a trend verified by data from meteorological services, which confirm a country-wide average temperature increase of 0.23°C per decade since 1960. Total annual rainfall over the same period has decreased by 3.3% per decade. Farmers are also reporting a delayed onset and increased intensity of the wet season. These changes, and the unpredictability of rainfall events, cause increased risk of crop failure due to poor seed germination and washing away of seeds or crops. Similarly, livestock pastures are decreasing in size, and the risk of parasites and diseases is increasing.

Objective

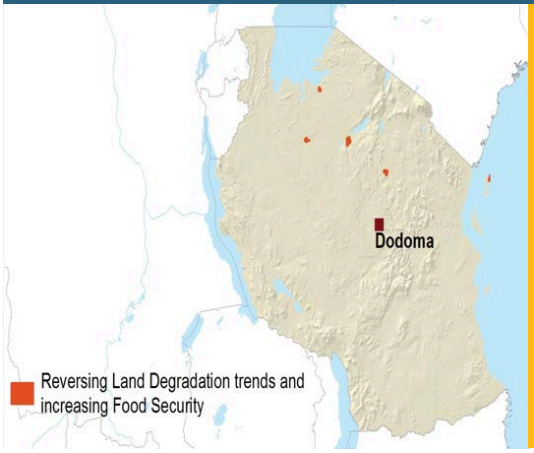
The objective of the project is the reversal of land degradation trends in central Tanzania and on Pemba (Zanzibar) through sustainable land and water management, and ecosystem-based adaptation.

Global Environmental Benefits
GEBs

29,200 (ha)
land under integrated and sustainable management

1,223,000 ($MtCO_2e$)
GHG emissions avoided or reduced

15-25 (%)
genetic diversity of crops and animals maintained or increased



Project area for Tanzania

Institutional capacity building for sustainable land management

- At least 1 inter-village Natural Resources Management Committee per district bringing together at least 2 or more villages to resolve any emerging conflicts over resources, with more than 30% of leadership positions filled by women
- At least 10 staff per district, 5 staff per village, and 3,000 community members, with more than 30% of women and more than 30% of youth represented, who are trained in participatory joint land-use mapping, planning and regulation in support of sustainable land management, forest conservation and sustainable agropastoralism

Key components

The project area covers 22 villages in five districts located in the Kondoa, Mkalama, Nzega and Magu areas on mainland Tanzania, and the Micheweni area on Zanzibar (Pemba Island). In each district the project area covers one or two wards, with two or more villages sharing the same resources in a landscape.

To achieve its objective, the project is structured into three interrelated components

1. **Component one** builds capacity of customary, village and district institutions in natural resources management and joint village land-use planning. This supports the development of climate change adaptation capacities, as well as the mainstreaming of sustainable land and water management, and of biodiversity conservation practices among selected village communities sharing the same resources;

2. **Component two** supports the sustainability of ecosystem services and food and nutrition security in five focus areas:
   - Conservation agriculture and other climate-smart agricultural practices;
   - Rainwater harvesting and micro-catchment management;
   - Sustainable rangeland management;
   - Tree nurseries and sustainable woodland management; and
   - Income generation activities and linkages to markets for sustainably produced and climate-resilient communities; and

3. **Component three** focuses on monitoring and assessing the progress in sustaining ecosystem services.

Project targets

Project targets for scaling up of sustainable and climate-smart agriculture, land, water and pastoral management systems:

3,000 household reporting
Yields per hectare of improved soil health, and increased productivity and income generation from agropastoral ecosystems

Having enough water for primarily livestock and horticulture needs

307,607 ($MtCO_2e$)
greenhouse gas emissions avoided

915,247 ($MtCO_2e$)
sequestered

100
farmer field schools created with 25 participants

30% woman 30% youth

20 groups
operating tree nurseries

30% woman 30% youth

25,000 (ha)
under conservation and climate-smart farming and sustainable management

4,200 (ha)
woodland, rangeland and degraded land reforested or afforested

3,000 farmers
reporting having enough water for primarily livestock and horticulture needs

Reversing Land Degradation Trends and Increasing Food Security in Degraded Ecosystems (LDFS)
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