

# TANZANIA ECOBOMA

13 CLIMATE  
ACTION



## A Climate Resilient Model for Maasai Steppe Pastoralists

SEPTEMBER 2019

ECOBOMA, a Climate Resilient Model for Maasai Steppe Pastoralists is one of five projects, which falls under the European Union funded Global Climate Change Alliance. The project encompasses the eco-village approach, and has made strides to increase and diversify incomes, and strengthen resilience and reduce vulnerability to climate change. The targeted 2000 households are located in Arumeru District and depend on the ecosystem for their livelihoods, which are increasingly becoming threatened due to climate change.

The project has contributed to Tanzania's poverty reduction strategy and improving the livelihoods of communities. ECOBOMA is aligned with Sustainable Development Goal 13 (SDG 13) – CLIMATE ACTION.

### KEY INFORMATION

<b>Sector:</b>	Climate Change
<b>Lead Partner:</b>	Istituto Oikos
<b>Other Partners:</b>	Arusha District Council, Meru District Council, Nelson Mandela AIST, Oikos East Africa
<b>Budget:</b>	€ 1,796,262
<b>Duration:</b>	2015 – 2019

### BACKGROUND

The livelihoods of pastoralists in dryland areas depends entirely on the availability of fragile ecosystem services. In the Maasai Steppe, there is clear evidence that climate change has already dramatically affected the ecosystem. This is supported by data showing a marked decrease in rainfall over the last 20 years, which has coincided with a deterioration of the living conditions of pastoralists and high vulnerability of livestock herds. Northern Tanzania continues to experience unpredictable weather patterns with serious drought in 2016–2017, followed by severe flooding in 2018 and drought again in 2019.

### MAIN ISSUES

- Intense grazing and a decrease in suitable pastures
- Declining water points for humans and livestock
- Increased population within pastoral societies
- Poor information on the impact of climate change

ECOBOMA has introduced 16 technologies and innovations for different sectors – targeting water, rangeland management, livestock, crop cultivation, energy and education.

Four rehabilitated earth dams have been finalized. The water storage availability has increased by 47,000 m<sup>3</sup>. In a good rainfall year the total rain harvested is at least 81,000 m<sup>3</sup>. Communities are engaged



in water management through newly established technical committees. Quality assessments and the ecological monitoring of the rangelands has been conducted with a view to increasing resilience by reducing the vulnerability of the target pastoralist systems.

A group of women and youth have been trained to become leather artisans. The group processes leather and sells handmade leather products. Capacities of local government has been strengthened to cope with the impacts of climate change, and community members and citizens have increased their knowledge and awareness thanks to specific campaigns. A climate change centre of knowledge has been set up and is now managed by the Nelson Mandela African Institution of Science and Technology (NM-AIST) to raise awareness and harness discussions about how Tanzania can adapt to the impact of climate change.



Pastoralists are seeking other ways to earn a living as land for livestock grazing becomes more scarce

# GCCA+

THE GLOBAL CLIMATE CHANGE ALLIANCE PLUS INITIATIVE



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TANZANIA

## PROJECT DETAILS

Covering a geographical area of circa 280 square kilometres the overall objectives of the project has been to increase vulnerable Tanzanian communities' capacity to adapt to the adverse effects of climate change and contribute to poverty reduction in rural areas.

Specific objectives have been to improve livelihoods and the resilience of the Maasai communities of Northern Tanzania through the application of the ECOBOMA model: a low cost, culturally acceptable, replicable model of holistic solutions to vulnerable pastoral systems

Target groups include:

- 2,000 families of pastoralist and agro-pastoralist (about 250 bomas/homes)
- 500 women and youth to be empowered
- 6,000 children attending eight primary schools in the target area to engage in activities that increase climate change preparedness
- Local authorities in four villages and seven sub-villages and traditional leaders to manage activities
- Scientific journalists from national and local media to publish/broadcast content

The aim is to reduce poverty and vulnerability of marginalized pastoral communities and increase the capacity of local government authorities in Arusha and Meru District Councils in addressing the challenges of climate change.

The project design has been the result of a collaborative and participatory contribution from Istituto Oikos and the Nelson Mandela African Institution of Science and Technology, two highly experienced partners in the field of pastoralist community development, ecological monitoring and wildlife protection.

The overall methodology has been the utilization of a participatory climate change vulnerability assessment and the prioritisation of the guidelines of the 'Climate Vulnerability and Capacity Analysis' (CARE, 2009).



## Expected Results

- Access to ecosystem services protected and improved
- Economic assets of pastoralist communities developed
- Local government capacity to cope with Climate Change increased
- Knowledge about climate-related vulnerabilities and impacts of Climate Change adaptation solutions increased

## Achievements

- Four earth dams have been rehabilitated and their volume increased by 47,000 m<sup>3</sup>. Local communities were trained on improved water management.
- Community-driven data collection to measure rangeland's health and promote good rangeland management, production of ecological vulnerability maps for communities.
- Installation of three meteorological stations for installation in the project area
- Establishment of around 200 ha of community forests
- Training of 30 Village Game Scouts who patrol over 23,000 Ha, coordinated by the village government and in partnership with the District Game Officers.
- 40,000 indigenous trees (e.g. Commiphora sp. and Euphorbia tirucalli) planted to fence and protect 110 bomas and four dams from wind, animal intrusion, and soil erosion.
- Scientific networks established with international and national experts to share the ECOBOMA approach to rangeland's conservation.
- Construction of 20 biogas digesters to produce cooking gas, reducing dramatically the domestic use of firewood, a time consuming and environmentally damaging practice.
- 119 households have daylight thanks to 'litre of light' solar bottles installed
- Skills development and creation of artisanal cooperatives of women and young men to tan leather (15 people) and cure/dry meat (168 people). In two years, the leather group sold leather products with a turnover of €11,000.00.
- Introduction and adoption of smart agriculture techniques for 60 households
- Set up of two land use planning units (36 officers in total) in Arusha and Meru DC
- Facilitation of the incorporation of climate change adaptation interventions in districts' planning and budgets
- Involvement and capacitation of 150 Local Government Authorities at all levels
- Facilitation of five comprehensive village by-law packages for rangeland management and registration of two new Community Owned Water and Sanitation Organisations.
- 25 exchange visits, technical workshops and dissemination events organised involving Local Government Authorities, universities, journalists, students, teachers and the general public for a total of more than 135,000 individuals exposed to climate change knowledge
- Capacity building for 13 livestock service providers (para veterinarians) and 45 skinner
- 4,600 pupils increased their knowledge on climate change and risk management
- 85 knowledge products designed ensuring high visibility to GCCA Tanzania stakeholders

## Sustainable Future

ECOBOMA included a gradual and thorough hand over process to the partners. LGAs, and to community members. An agreed action plan amongst all key stakeholders: Arusha and Meru District Councils, NM-AIST and the Regional Secretariat, appointed the District Authorities to drive the exit strategy, with the ECOBOMA team providing technical assistance. This approach has facilitated the internalization of the project's investments into the LGAs assets. A Memorandum of Understanding (MoU) between Oikos, Arusha and Meru Districts has defined the commitment of the two Districts toward the long-term sustainability of the activities initiated by the project and the framework for further cooperation among the parties on the scale-up of successful climate resilient approaches. Thanks to the ECOBOMA collaborative experience, both District Councils have incorporated Climate Change Adaptation actions in the District Development Plans.



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This publication has been produced with the financial support of the European Union. Its contents are the sole responsibility of Joanna Martin, V&C Expert for NIRAS Finland and do not necessarily reflect the views of the European Union.



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