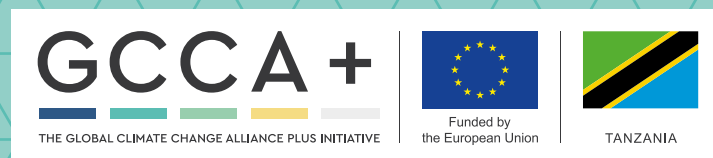




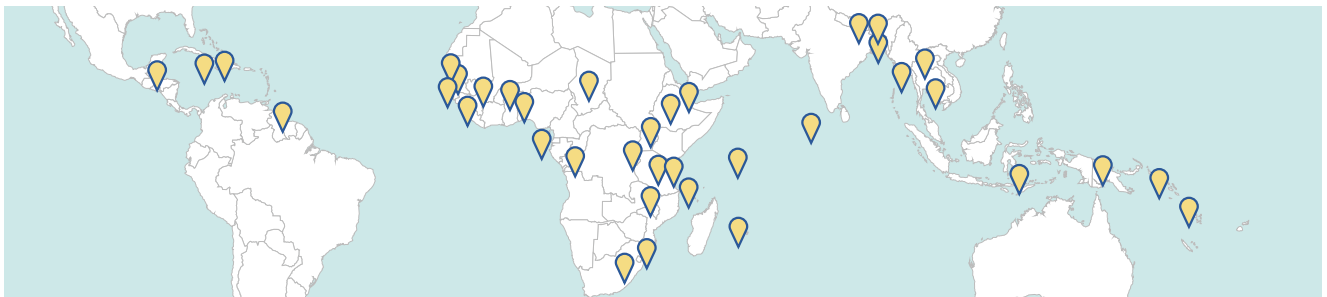
GCCA TANZANIA

ECO-VILLAGES IN TANZANIA: A MODEL FOR CLIMATE CHANGE ADAPTATION

2017 HIGHLIGHTS



WHAT IS THE GCCA/ GCCA+



The Global Climate Change Alliance (GCCA+) globally

The Global Climate Change Alliance was established by the European Union (EU) in 2007 to strengthen dialogue and cooperation with developing countries, in particular the least developed countries (LDCs) and small island developing States (SIDS). It started its work in just four pilot countries. Today it has a budget of more than €300 million and is one of the most significant climate initiatives in the world. It supports 51 programmes around the world and is active in 38 countries, 8 regions and sub-regions and at the global level.

In 2014, a new phase of the GCCA, the GCCA+ flagship initiative began. The GCCA+ focuses its technical support on three priority areas:

- Climate change mainstreaming and poverty reduction
- Increasing resilience to climate-related stresses and shocks
- Sector-based climate change adaptation and mitigation strategies

GCCA Tanzania

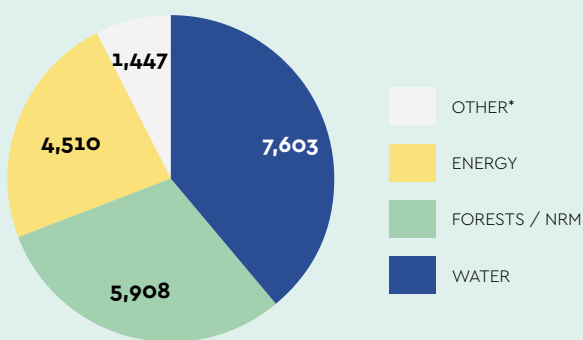
The overall objective for GCCA Tanzania is to strengthen the resilience of vulnerable Tanzanian rural communities to the adverse effects of climate change and contribute to poverty reduction. The GCCA Tanzania programme started with a first phase from 2011 to 2013. Under the current second phase from 2015 to 2019, five projects are supported that use the eco-village approach to increase the climate change resilience of the target communities. The support comprises project funding, as well as dedicated technical assistance (TA) to strengthen Monitoring & Evaluation (M&E) and Visibility & Communication (V&C) activities.

The eco-village concept aims to regenerate social and natural environments in villages around the world. While there is no one way of being an eco-village, there are three core practices at the heart of the eco-village approach:

- Being rooted in local participatory processes
- Integrating social, cultural, economic and ecological dimensions in a whole systems approach to sustainability
- Actively restoring and regenerating their social and natural environments

GCCA TANZANIA 2017 RESULTS AT A GLANCE

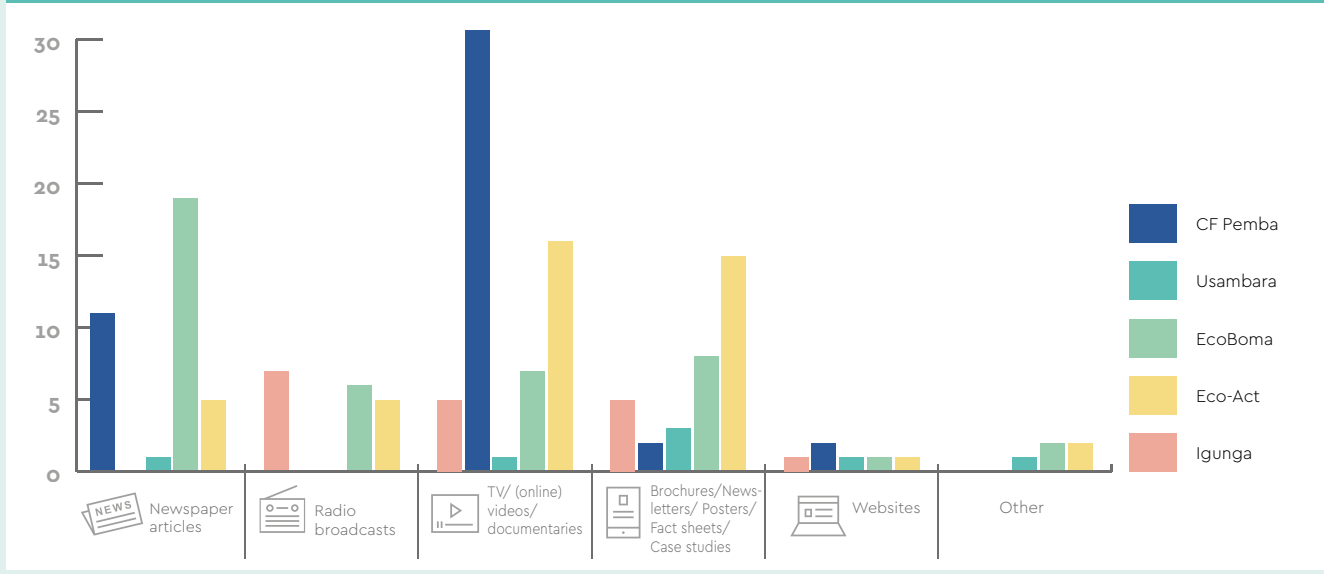
33,359 households reached, distributed as follows



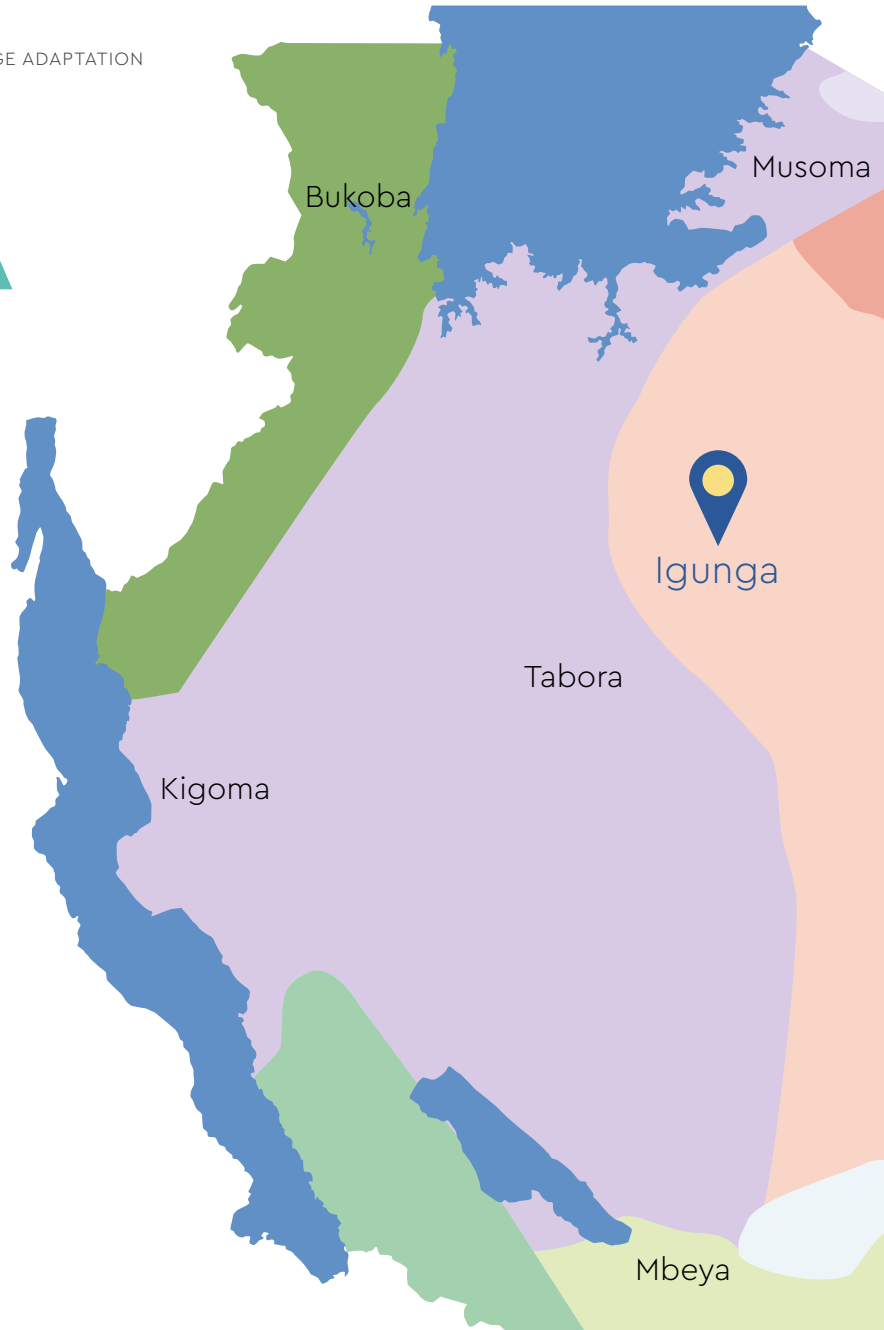
(*Other includes f.ex. training on CCA and support to savings and loans groups)

- 41.7%** of beneficiaries are women
- 1,505 ha** already brought under sustainable management
 - 1,102 ha of forests
 - 403 ha of pastoral land
- 454,349** trees planted around houses and schools and on degraded land
- 4,818** Fuel Efficient Cook Stoves constructed from local materials by local artisans
- 279** local government staff engaged in project activities and capacity building

High visibility through a range of communication products



THE GCCA TANZANIA PROJECTS



GENERAL CHARACTERISTICS

- located in different agro-ecological zones
- climate change adaptation activities in four main sectors: agriculture, water, forests and energy
- working closely together with village and district government authorities
- explicit attention for knowledge sharing and communication activities

CF PEMBA – Scalable Resilience: Outspreading Islands of Adaptation project

Location: Wete, Pemba Island
Agro-ecological zone: Coastal
Rainfall: Bimodal 700–1200 mm

The project is implemented by Community Forests Pemba in partnership with Community Forests International and the Wete District Authority. The project builds on the achievements of the precursor project “Resilient Landscapes for Resilient Communities in Pemba”, which was funded under the first phase of GCCA Tanzania. The project supports 26 rural communities on Pemba island and surrounding islets to build a green economy while adapting to climate change. Activities include tree planting, agroforestry, renewable energy generation, rainwater harvesting and permaculture kitchen gardens.

ECOACT – Eco-Village Adaptation to Climate Change in Central Tanzania

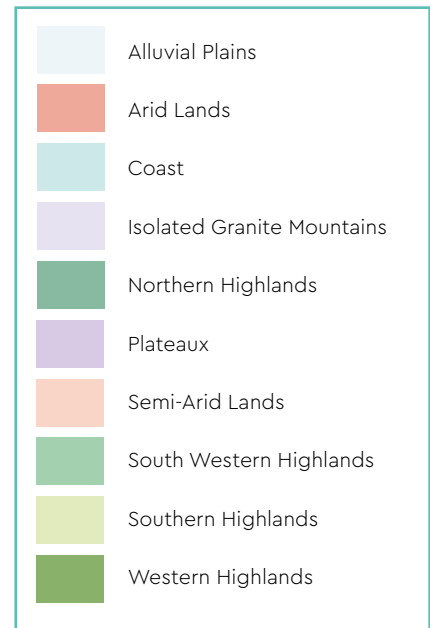
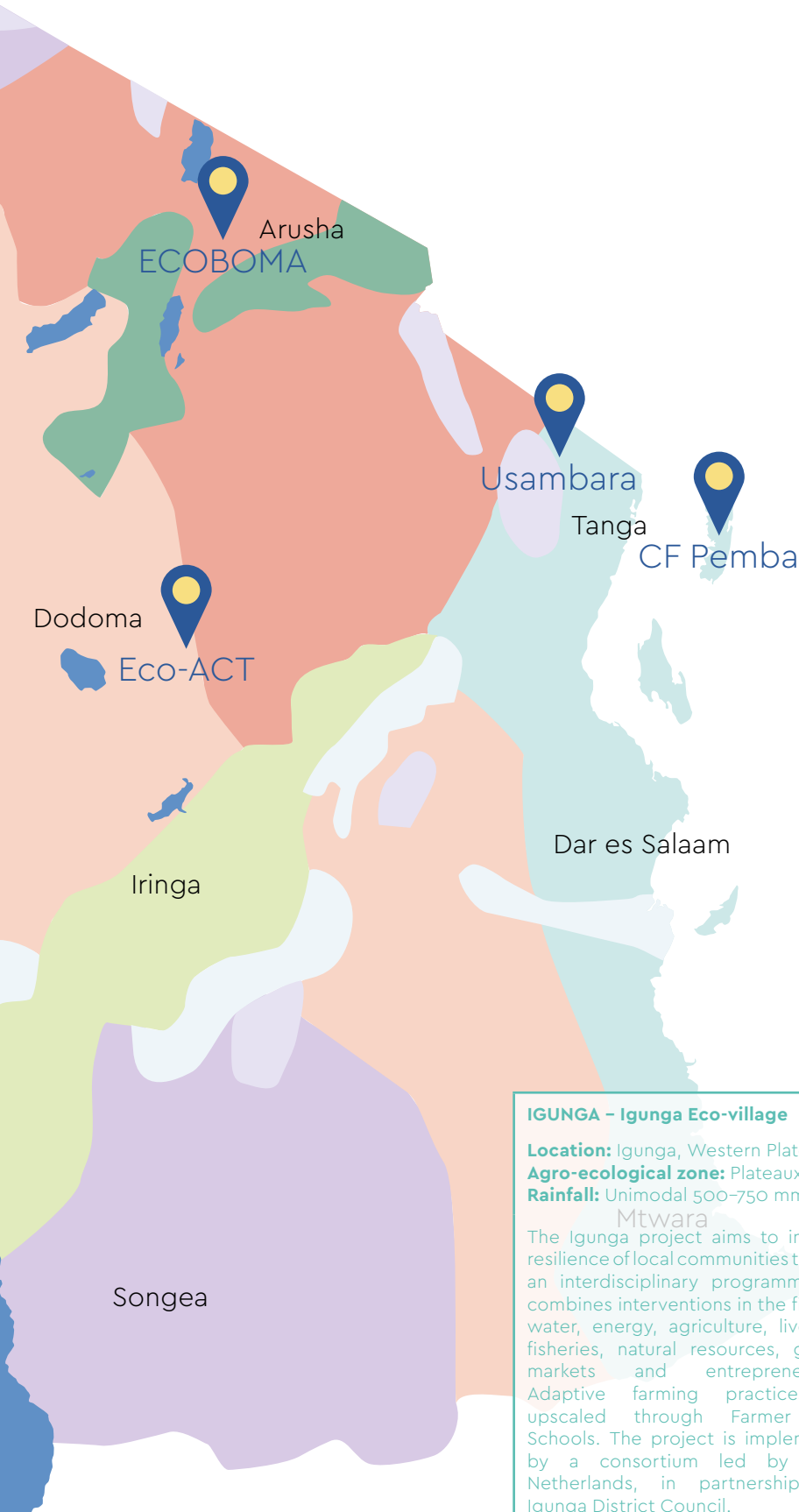
Location: Dodoma, Central plateau
Agro-ecological zone: Semi-arid
Rainfall: Unimodal 400–450 mm

The EcoAct project is the successor to the Chololo Eco-village project funded under the first phase of GCCA Tanzania. The project is implemented by a consortium led by the Institute of Rural Development Planning, in partnership with Dodoma and Chamwino District Councils. The project is building resilience of the target communities by scaling up the most effective, affordable, and gender-oriented climate change adaptation innovations from Chololo Ecovillage in water, agriculture, energy and forestry.

A Climate Resilient Model for Maasai Steppe Pastoralists

Location: Arusha, Masaai steppe
Agro-ecological zone: Arid to semi-arid lands
Rainfall: Bimodal 250–500 mm

The EcoBoma project is implemented by a consortium led by Istituto OIKOS, in partnership with Arusha and Meru district councils and Nelson Mandela – Africa Institute of Science and Technology. The project aims to improve and increase the capacity of vulnerable Maasai Pastoralists by adapting and increasing resilience to the adverse effects of climate change through the application of the EcoBoma model: a low cost, culturally acceptable, replicable model of holistic solutions to vulnerable pastoral systems.



IGUNGA – Igunga Eco-village
Location: Igunga, Western Plateau
Agro-ecological zone: Plateaux
Rainfall: Unimodal 500-750 mm

Mtwara

The Igunga project aims to increase resilience of local communities through an interdisciplinary programme that combines interventions in the fields of water, energy, agriculture, livestock, fisheries, natural resources, gender, markets and entrepreneurship. Adaptive farming practices are upscaled through Farmer Field Schools. The project is implemented by a consortium led by Heifer Netherlands, in partnership with Igunga District Council.

EAST USAMBARA – The Integrated Approaches for Climate Change Adaptation in the East Usambara Mountains

Location: Muheza, Usambara Mountains
Agro-ecological zone: Isolated mountains of the Northern Highlands
Rainfall: Bimodal 1000-2000 mm

The East Usambara project aims to increase and diversify incomes, strengthen resilience and reduce vulnerability to climate change-related impact in eight communities whose livelihoods depend on the ecosystems of the nearby high biodiversity forests in the East Usambara mountains, which are increasingly becoming threatened due to climate change. The project is implemented by a consortium led by Spanish NGO ONGAWA, in partnership with Muheza District Council.

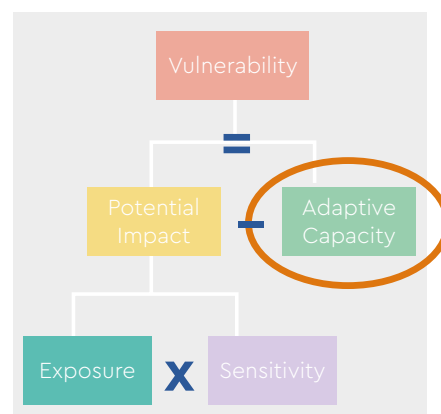


PROJECT APPROACHES

Building climate change resilience

All projects use the eco-village approach to build resilience of the target communities against climate change.

Resilience is strengthened by building adaptive capacity through the introduction and adoption of climate change adaptation technologies and approaches. This will reduce the vulnerability of target communities to the impact of climate change.



The urgent need for resilience building of rural communities has become clear in the rainy season 2016/2017, with unfavourable rainfall patterns in most project areas directly affecting agricultural production. Igunga, EcoAct and EcoBoma received below average rainfall, while the rainy season in Usambara started much later than normal. CF Pemba on the other hand received very high rainfall.

Partnering with local government authorities

The projects collaborate closely with local government authorities at district and village level through:

- awareness raising and capacity building on climate change issues
- directly involving them in project activities
- facilitating community level and district level agreements and by-laws to protect forests and other natural resources that are important for long term resilience building

Targeting the poor

To strengthen the projects' impact on overall poverty reduction, they are mainstreaming pro-poor approaches in their selection of beneficiaries and implementation of the activities. This is however an area where projects face considerable challenges, given that the poorest are generally hardest to reach and least heard in community meetings. There are also promising Climate Change Adaptation measures, such as biogas installations, which require a level of investments that poorer households cannot afford.

ACTIVITIES

Sector	Intervention type	Examples
Agriculture	Improved access to drought tolerant seeds	Production of Quality Declared Seeds
		Subsidized seed packages
	Improved crop production practices	Land forming like terraces, ridges and Vetiver grass hedges
		Manure
		Agro-forestry - including spice forests
	Improved livestock practices	Drip irrigation
Push-pull pesticide control		
		Improved breeds
		Improved husbandry and livestock services
		Rangeland monitoring
Water	Water for agriculture and livestock	Small dams
		Wells
		Grey water use
	Water for domestic use (incl. schools) and sanitation	Gravity water schemes
		Community solar water supply
		Rainwater harvesting
		Shallow wells
		Water filters
		Pit latrines
Forests	Forest and natural vegetation management	Natural regeneration in crop fields
		Nurseries and tree planting
		Commiphora fencing
		Community forests
Energy	Renewable energy and energy efficiency	Solar lights / electricity
		Improved Fuel Efficient Cook Stoves
		Biogas
Cross-cutting	Livelihoods diversification	Beekeeping
		Butterfly farming
		Savings and Loans groups
		Value chain development
		Leather tanning
		Kitchen gardens
		Fish farming
		Dried meat
	Awareness raising / capacity building	Training village committees
		Training district staff
		School awareness activities
	Legislation / policies / planning	CC knowledge centre
		Communication products
Research	Local level NRM and land use plans and by-laws	
	District level plans and by-laws	
	Enforcing by-laws	
	Community-level resilience research - with research institutions and universities	



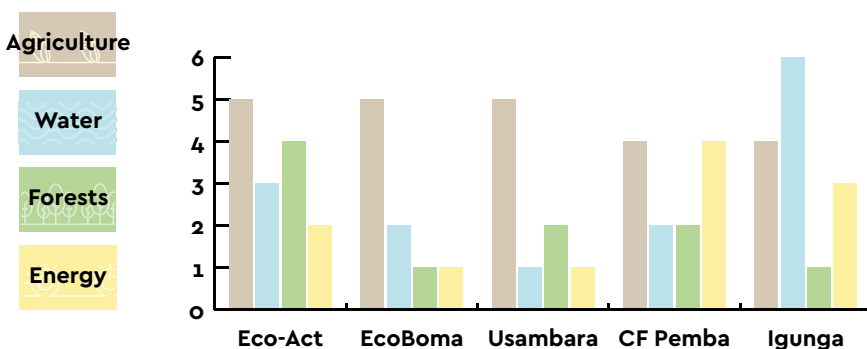
PROGRESS ON RESULTS

The GCCA Tanzania projects were all in full implementation in 2017. While it is still too early to be able to assess the long term impact of the projects on building the climate change resilience of the communities, overall good progress has been made with the introduction of adaptation measures in agriculture, forestry, water and energy and building awareness and capacity of local government authorities on climate change issues. The results of the projects have also been shared widely within Tanzania and globally.

How we measure progress

To be able to present consolidated results of the 5 projects that constitute the GCCA Tanzania programme, a common results framework was developed in 2017 and all results frameworks of the individual projects were aligned with this common framework. It includes a list of 23 indicators to measure outputs, outcomes and impact of the combined projects.

New technologies and innovations tested



Approaches for introduction of new technologies / interventions

The way these new technologies are promoted differs between the projects. For agricultural innovations, all projects provide training. Some also provide free inputs like seeds or farm implements to apply new technologies in their own fields, while others use the Farmer Field School (FFS) approach. The FFS approach only provides input support for demonstration fields, with farmers then expected to become aware of the advantages of the demonstrated

practices and use their own resources to apply the same in their own field. How effective each of these approaches is in achieving a sustainable outcome will become clearer in the coming years.

For most other interventions, the projects generally provide all materials and equipment, where needed, with communities or individual households expected to contribute through labour.

Agriculture

- In the EcoAct project selected farmers have been trained to produce open-pollinating drought tolerant seeds in line with the requirements for certification of quality declared seeds (QDS). 34 farmers have been awarded with QDS certificates by the Tanzanian Official Seed Certification Institute and the seeds have been distributed in the target communities.
- The EcoBoma project provides technical support to a women's group of leather producers. In 2017 the group tanned 1029 goat & sheep skins and 93 cow skins, of which 514 were sold.
- Igunga uses the Heifer approach of Passing on the Gift to promote replication of good practices and solidarity within communities. Two of the four original fish farming groups were able to harvest mature fish, sell it on the market and bought new fish fingerlings, of which over 3,000 were passed on to new groups.
- EcoBoma has developed an ecological monitoring system for pasture lands that balances scientific rigour with the need to ensure that it can be implemented by the local communities, with 5 villagers so far trained. The work has already led to spin-off effects such as the establishment of community forests and environmental patrols organized by the communities themselves.

Water

- The East Usambara project has set up River Committees and developed a conflict registration system that will help in particular with resolving issues of inappropriate land use on or near river embankments.
- Several projects have introduced solar pumps for water supply systems based on borehole water or rainwater harvesting. In the case of EcoAct this has already led to the spin-off effect that a proposed WB project for water supply will focus on using solar pumps rather than diesel pumps.
- Most projects have supported rainwater harvesting systems. The majority of these are for schools and individual households, but Community Forests Pemba has constructed rainwater harvesting systems at the community level, with a focus on small islands off the coast of Pemba with no other access to potable water.
- Rehabilitation of ponds and dams has led to the increase of storage capacity for agriculture / livestock of 72,293 m³. The Igunga project introduced a locally produced ox-drawn scoop for this work.



Forests / NRM

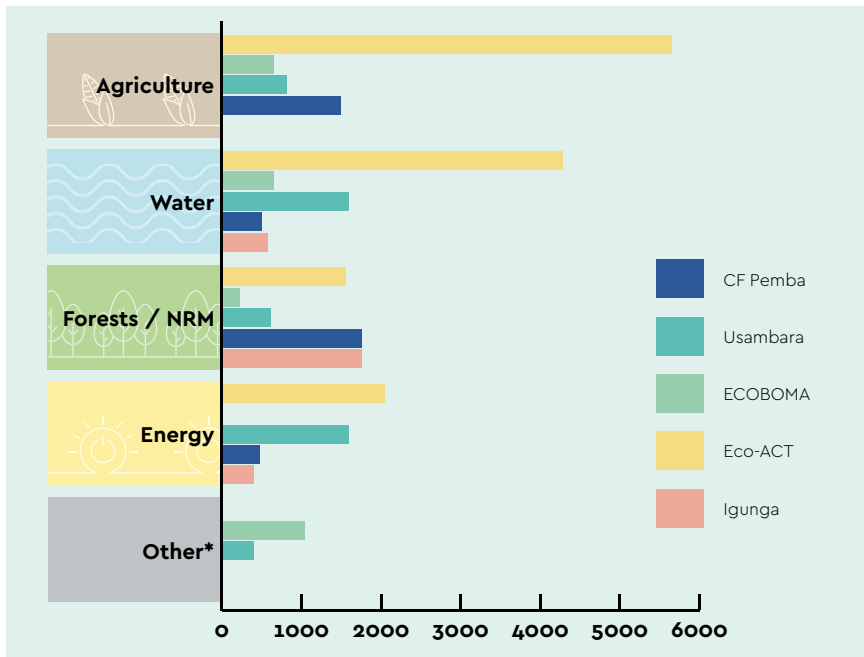
- A total of 126 tree nurseries were set up with project support, with a total of 456,349 seedlings, transplanted, with a survival rate of 65%.
- EcoBoma has promoted live fencing of bomas through planting 18,000 Commiphora and Euphorbia tirucalli cuttings. Live fencing reduces the need to cut trees and shrubs for more traditional fences made from cut branches.
- Community Forests Pemba has been working on promoting a so-called "spice forest polyculture" systems (which can be considered a form of agro-forestry). So far, 25 ha has been established in 60 individual plots and a value chain for the spices has been established.
- East Usambara is piloting the expansion of butterfly farming, which in the past has been introduced in other parts of the Usambara mountains. A total of 156 butterfly farming group members (55% women and 45% men) have been trained, 18 cages constructed and over 2,000 butterfly host plants planted. First sales have been made.



Energy

- Four of the five projects have introduced fuel-efficient Fuel Efficient Cook Stoves, using different models. A total of 4,818 stoves has so far been produced. The model introduced by East Usambara, made from local materials, appears to be one of the most successful ones, given the strong demand amongst community members to have one installed and the fact that monitoring by the project indicates the stoves are intensively used by the beneficiaries. In how far these Fuel Efficient Cook Stoves help reduce firewood use still needs to be assessed in detail.
- Four of the five projects support the distribution of solar lamps and kits. Most of these are for individual households, but Community Forests Pemba has also installed community solar energy stations, including in the islet referenced above where a community rainwater harvesting was also installed.





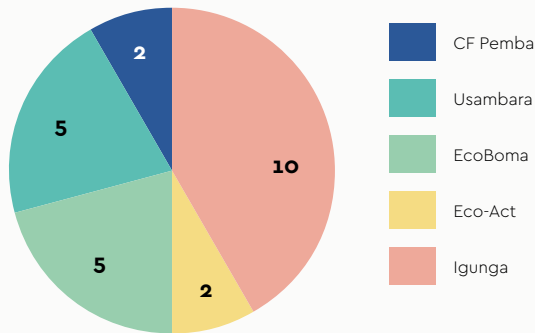
Beneficiaries



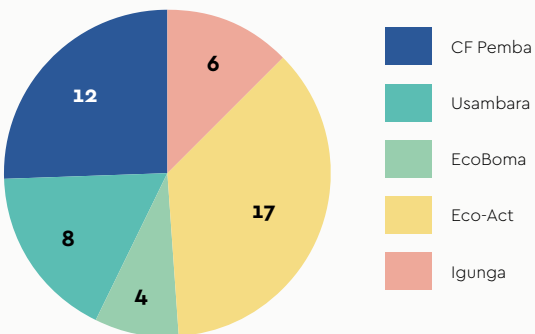
Through these interventions the projects have so far reached over 33,000 beneficiaries, of which around 47% are women.

* Refers to cross-cutting activities like training on climate change adaptation and support to savings and loans groups for alternative income-generating activities

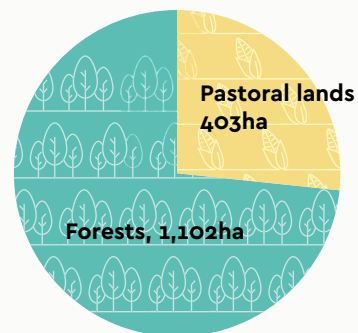
Number of village plans or agreements that include project innovations



Number of by-laws facilitated



Area brought under sustainable management agreements



Local government authorities are strongly involved

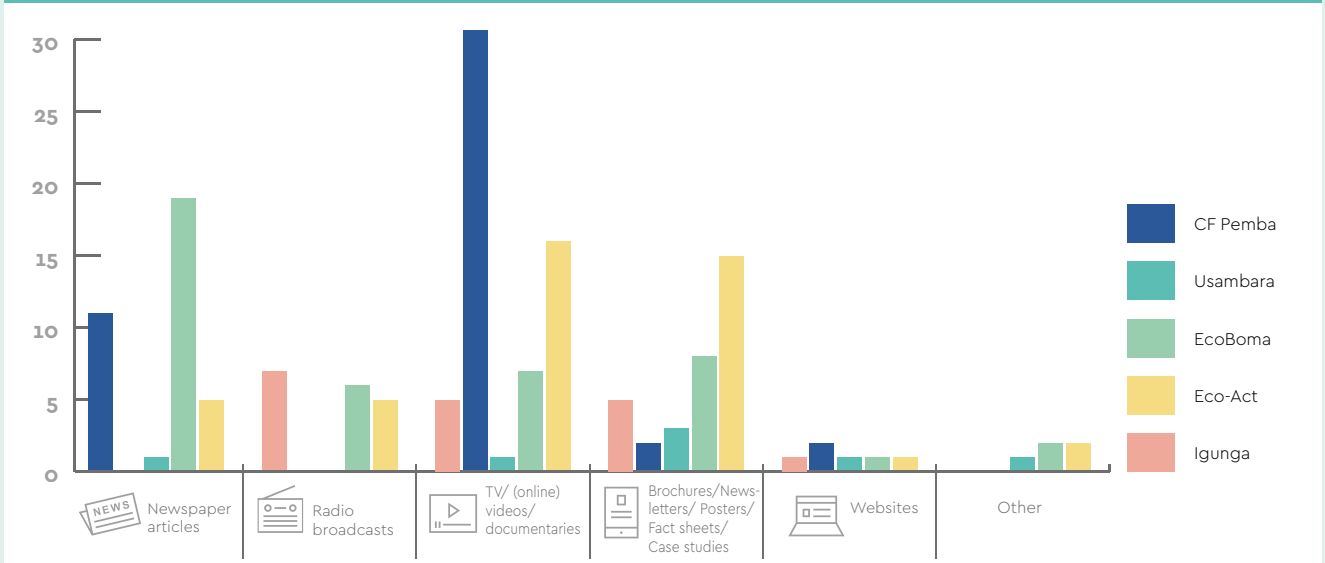
More than 250 members of district and village government authorities have been involved in the projects, increasing their awareness on climate change and the need for resilience building through joint activity implementation and training courses. It has led to inclusion of the innovations in village and district plans and agreements and the elaboration of by-laws focusing on sustainable management of the natural resources on which the communities depend (pastures, forests, soils) all aspects that help increase long term sustainability prospects. The next challenge will be to ensure compliance with these plans and by-laws, an issue that will receive particular attention in the coming years. It will also require districts to allocate budgets for these activities.

GCCA TANZANIA IN THE NEWS

With support from the GCCA Tanzania Visibility & Communications expert, the projects have produced a wide range of knowledge products to share their approaches, results and lessons learnt with a global audience.



High visibility through a range of communication products

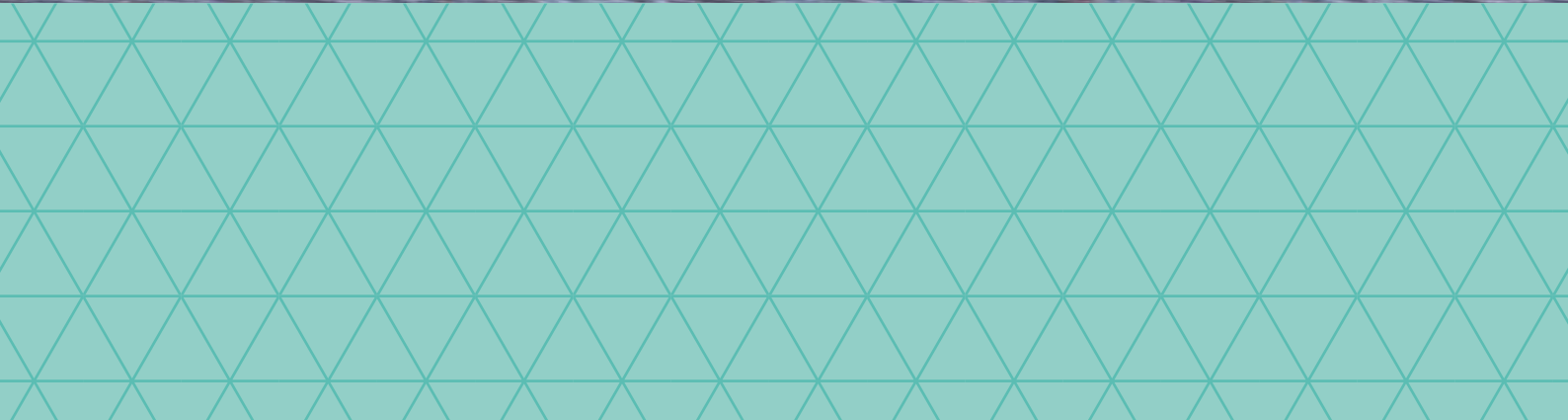


CHALLENGES AND LESSONS LEARNT

While the GCCA Tanzania projects have seen good progress in 2017 they have faced a number of challenges that have affected project performance and effectiveness of the interventions. Lessons have been learnt that are not only of relevance to the projects but that can also be beneficial to other climate change projects in Tanzania and elsewhere.

CHALLENGE	CONSEQUENCES	LESSONS LEARNT AND RECOMMENDATIONS
Severe drought conditions in several project areas	<ul style="list-style-type: none"> ▶ Project interventions like fish ponds and wells negatively affected 	<ul style="list-style-type: none"> ▶ A thorough screening process is required to ensure that proposed adaptations interventions are actually resilient to climate change ("climate change proof")
Ensuring that the project interventions benefit the poorer households	<ul style="list-style-type: none"> ▶ Limited poverty reduction impact. Project may inadvertently lead to increase in inequalities 	<ul style="list-style-type: none"> ▶ A comprehensive pro-poor approach needs to be mainstreamed in all aspects of the projects
Central government not yet very strong on supporting CCA mainstreaming at decentralised level	<ul style="list-style-type: none"> ▶ Climate change adaptation not featuring in district planning guidelines or budgets 	<ul style="list-style-type: none"> ▶ Working with local government authorities alone is not sufficient. National government needs to be engaged more.
Cultural and traditional barriers hamper acceptance of new methods	<ul style="list-style-type: none"> ▶ Interventions may be adopted while project supports them but abandoned afterwards 	<ul style="list-style-type: none"> ▶ Gradually reduce the project support for introduced interventions and carefully monitor continued adoption rates
Mismanagement of community level interventions	<ul style="list-style-type: none"> ▶ Lack of maintenance of f.ex. water supply schemes. Potential conflicts in the communities 	<ul style="list-style-type: none"> ▶ Projects to continue to monitor performance of interventions that are considered "completed" and where needed provide management and O&M support and help resolve conflicts





COMMUNITY
FORESTS
PEMBA



For further information please visit www.gcca.eu and https://eeas.europa.eu/delegations/tanzania_en