



*Prisca Mayende in Bungoma is one of the 29,500 farmers participating in the Kenya Agriculture Carbon Project. "Before, there were no trees on my farm and productivity was low. After getting trainings from Vi Agroforestry, I started planting trees, doing mulching and using sustainable farming practices. This has improved the maize yields from 3 to 8 bags, and I now have firewood and fodder from the trees. I am proud of my farming today!"*

# Kenya Agriculture Carbon Project (KACP)

Addressing food security for 30,000 farmers while combating climate change and land degradation.

A Vi Agroforestry project in partnership with the World Bank's Bio-Carbon Fund and UNIQUE forestry and land use



**Vi Agroforestry**



John Oruko pricking out *Grevillea* seedlings.

## Key Results:

- 29,497 small-holder farmers participating through 1,730 farmer groups
- 21,966 ha of land has been put under Sustainable Agricultural Land Management (SALM) practices
- SALM practices sequestered an average of 1.68 tCO<sub>2</sub>e/ha/year
- 90% maize yield increase in all agro-ecological zones in 5 years resulting to increased food security
- Improved income for households from increased crop yields and sale of carbon credits
- Increased access to financial services.
- 184,447 tonnes of CO<sub>2</sub>e sequestered and verified of which 24,788 tCO<sub>2</sub>e sold to the BioCarbon Fund (2010-2015)
- Increased farmers' climate change knowledge
- Increased access to firewood, fruits and fodder from trees
- Farmer institutional growth and transformation to own and scale up activities efficiently

## Key Features

<b>Location</b>	Bungoma, Kisumu and Siaya Counties, Kenya
<b>Project developer</b>	Vi Agroforestry
<b>Other actors</b>	Bio-Carbon Fund of the World Bank, UNIQUE forestry and land use
<b>Objectives</b>	<p>Increase farmers' resilience to climate change</p> <p>Increase food security through increased farm productivity and diversified food sources</p> <p>Increase farm income through farming as a business</p> <p>Reduce greenhouse gas emission</p> <p>Sell carbon credits for the benefit of small-holder farmers</p>
<b>Project activities</b>	<p>Sustainable Agricultural Land Management (SALM)</p> <p>Farm Enterprise Development</p> <p>Village Saving and Loaning</p>
<b>Target group</b>	Small-holder farmer families with an average farm size of < 1 ha
<b>Crediting period</b>	20 years (2009-2030)
<b>Target total emission reduction</b>	1,980,088 t CO <sub>2</sub> e (2030)
<b>Outreach model</b>	Farmers organised in groups connected to farmers' organisations
<b>Carbon offset standard</b>	Verified Carbon Standard (VCS)
<b>Monitoring, reporting &amp; verification</b>	The VCS methodology has robust and rigorous measurement system with Farmer-Based Activity Monitoring, validation and verification processes
<b>Benefits distribution &amp; co-benefits</b>	<b>Direct benefit</b> from carbon revenues which are shared between farmers (60 %) and to cover costs for the administrative work and advisory services (40%)
	<b>Indirect benefits</b> include higher agricultural productivity, larger monthly savings and more months of food self-sufficiency in a year
	<b>Other benefits</b> include soil conservation, strengthening institutional capacity and gender equality

## Challenges

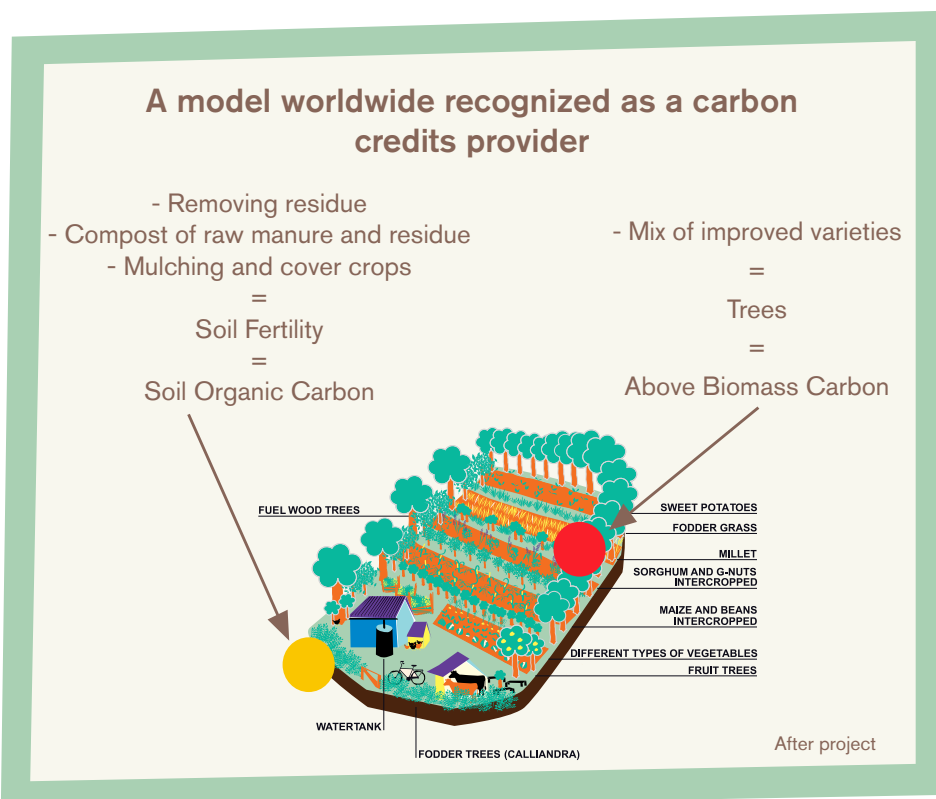
Climate change is one of the largest threats to development in Eastern Africa and the small-holder farmers in Western Kenya are severely affected. Unreliable rainfall makes it difficult to plant according to season. Drought and soil erosion destroy the land and make the harvest unsuccessful. Unsustainable farming methods lead to further soil degradation and lower yields. Moreover, the region is severely deforested due to weak legislation and the cutting of trees for income, farmland, firewood and building materials. Addressing food security while combating climate change and land degradation is an intertwined global challenge.



*Degraded land showing clear signs of soil erosion.*

## Sustainable Agricultural Practices & Carbon Sequestration

The Kenya Agriculture Carbon Project (KACP) has proven that implementation of Sustainable Agricultural Land Management (SALM) practices effectively contributes to reduction of greenhouse gases, increases small-holder farmers agricultural productivity and strengthens farmers' communities capacity to adapt to climate change. By 2016, a total of 29,500 small-holder farmers in Western Kenya had been mobilized in the project through 1,730 farmer groups. With increase in yields, focus is also given to farm enterprise development and access to finance. Vi Agroforestry promotes village savings and loaning to farmers who are not able to access formal banking services. Vi Agroforestry is strengthening farmer groups and farmers' organisations through a participatory approach and empowering community resource persons. This way, the institutional capacity is strengthened, enabling sustainable provision of extension services to their members.



## First Soil and Agricultural Carbon Project in Africa

KACP is the first soil and agricultural carbon project in Africa. The carbon revenues result in direct additional income to farmers as a reward for environmental services. The project has formed the basis for the development of a new carbon methodology, Verified Carbon Standard methodology Vm0017, based on an approach of accounting for carbon sequestration in the soil from the adoption of SALM practices.



*Sustainable Agricultural Land Management practiced on a farm in Kisumu; agroforestry, intercropping, crop diversification and fodder planting.*

## Sustainable Agricultural Land Management

The project promotes SALM practices related to:

- Nutrient management such as mulching and composting.
- Soil and water conservation such as retention ditches
- Agronomic practices such as crop rotation and intercropping
- Agroforestry - growing trees alongside crops and livestock
- Tillage and residue management such as zero-tillage
- Land restoration and rehabilitation such as natural regeneration
- Integrated Livestock Management with improved feeding, breeding and waste management
- Integrated Pest Management such as biological pest control
- Sustainable energy such as biogas and efficient stoves

**Vi Agroforestry** is a Swedish development organisation, fighting poverty and climate change together with small-holder farmer families and farmers' organisations in the Lake Victoria basin in East Africa. The foundation of Vi Agroforestry's work is sustainable agriculture and agroforestry – growing trees alongside crops and livestock. Since its inception in 1983, the organisation has helped planting over 100 million trees and improved the livelihoods for over 1,8 million people.

**Vi Agroforestry Regional Office East Africa**  
 +254 20 418 4480/1383  
[info@viagroforestry.org](mailto:info@viagroforestry.org)  
[www.viagroforestry.org](http://www.viagroforestry.org)



**Vi Agroforestry**