



Smallholders can save the carbon emissions of sizable towns

Novel finance helps Kenyans and Zambians farm climate-smartly

With the right practices, smallholders can reduce greenhouse gas emissions, and store carbon both in trees and the soil. To help African farmers adopt these approaches, the Syngenta Foundation has been partnering with the World Bank's BioCarbon Fund, COMACO and Vi Agroforestry since 2013. Successes so far indicate the value of further expansion.

Basel/Lusaka/Nairobi/, Week of the UN Climate Change Conference 2019

Organic carbon in soil has well-known agronomic benefits. It helps soils retain water, release nutrients and bind toxic substances. Scientists now also recognize soil carbon's ability to mitigate climate change. However, keeping it in their fields has been a challenge for many smallholders, for example in Kenya and Zambia. Unsustainable cultivation methods have heavily depleted soil carbon stocks. The Syngenta Foundation and partners saw an opportunity to stop soil degradation and mitigate climate change using carbon finance.

"The BioCarbon Fund was the first carbon fund to focus on reducing greenhouse gas emissions from different land use activities, including agriculture, thus keeping carbon in the soil through appropriate farming", says Evanshainia Syiem, Carbon Finance Specialist formerly working on the BioCarbon Fund. "We encouraged Sustainable Agricultural Land Management (SALM) and developed an accounting methodology that was approved by Verra. That was a major milestone in bringing carbon finance to the agriculture sector through the projects in Zambia and Kenya." After training, smallholders who implemented SALM were able to deliver Verified Carbon Units (VCU's) for additional income beyond the benefits from improved soil productivity. "What I find most inspiring is how farmers' awareness and knowledge of soil preservation have grown as a result", Syiem adds.

COMACO was our local partner on the ground in Zambia. They have years of experience in training farmers on SALM. Dale Lewis, CEO of COMACO, comments: "SALM income triggers commitment to conservation farming. Our joint initiative demonstrates the feasibility for rural communities in Africa. Once the system is set up, it is easy to replicate. We are now scaling up SALM across our operational area. This will take some time, but we have to take action to mitigate greenhouse gas emissions. We believe that SALM can make a crucial contribution."

Over the last six years, the BioCarbon Fund has stimulated sustainable intensification of agricultural systems in Kenya and Zambia. The fund has purchased more than 440,000 internationally tradable VCUs from farmers through investment. These represent a saving of 440,000 tons of CO₂-equivalents, the amount of carbon that 91,000 people¹ emit in a year.

"We have shown that carbon finance can incentivise farmers to adopt sustainable practices, says Dominik Klauser, the Syngenta Foundation's R&D Lead. "Rising prices in the carbon market are likely to create additional motivation. We are now discussing with partners how best to expand these models to more farmers."

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¹ Based on 4,8 t CO₂-equivalents per year per person (Average global emissions in 2018; Source: Friedlingstein et al. 2019)

COMACO is a Zambian organisation that collaborates with over 179,000 farmers in Eastern Zambia to enhance sustainable agricultural land management, reduce deforestation and protect wildlife. <https://itswild.org/>

Vi Agroforestry (Vi-skogen) is a Swedish development organization, fighting poverty and climate change - together. Vi Agroforestry has contributed to planting over 120 million trees and improved the livelihoods of over 2.3 million people. <https://viagroforestry.org/>

The BioCarbon Fund is a public-private sector initiative managed by the World Bank and has been at the heart of linking carbon finance and sustainable land use over the last decade. The fund supports land-use projects that generate multiple revenue streams through financial returns from the sale of emission reductions (i.e., carbon credits), and produce other benefits from sustainable land management practices. <https://www.biocarbonfund.org/>

The Syngenta Foundation for Sustainable Agriculture, a non-profit organization headquartered in Basel, Switzerland, helps smallholders become more professional growers. The Foundation works with partners in developing countries and emerging markets to extend science-based know-how, facilitate access to quality inputs, and link smallholders to markets in profitable ways. This adds value for rural communities, and sustainably improves food security. www.syngentafoundation.org