

# Dynamic Agroforestry in Cocoa Cultivation in Côte d'Ivoire



The same plot from the air: On the left the still young DAF field, on the right the cocoa monoculture. Photo: © CABOZ AG/ Daniel Stähli, 2023

**A long-term climate protection project by the M-Climate Fund aims to make cocoa production more sustainable. The use of dynamic agroforestry (DAF) is for the benefit of the climate - and cocoa farmers' income.**

Dynamic agroforestry (DAF) is a farming method that imitates the natural ecosystem by cultivating a variety of plant species at high densities. Apart from cocoa, these may include various shade trees and legumes, as well as crop plants such as banana, cassava and avocado. Growing among the crops are grasses and small bushes, which produce biomass. The various plant species complement and help each other. For instance, trees can offer shade and nutrients for other plants, while legumes fix nitrogen in the soil, thus increasing fertility. The system is called "dynamic" because it changes constantly over the years: an agroforestry plot develops and thickens over time, while plants like banana trees might disappear and make way for other plants that can cope with less sunlight. DAF results in a system of cultivation that is more resilient in the face of climate change and pests. At the same time, switching to DAF results in carbon dioxide being absorbed out of the atmosphere.

**Increased income, plus protection for forests and the climate, thanks to sustainable cultivation**

The cocoa industry in Côte d'Ivoire faces huge challenges. Many of their cocoa trees are very old, and their yields are not what they used to be. There is increased spread of the cocoa swollen shoot virus (CSSV), meaning that some producers barely have any cocoa beans to harvest. Studies suggest that agroforestry systems can reduce the negative effects of CSSV. A project within the framework of the M-Climate Fund is now enabling the introduction of DAF to 1,000 hectares (ha) of existing cocoa fields. Every hectare is planted with around 3,000 plants at the beginning.

## **Project type:**

Land Use and Forestry

## **Project location:**

Ivory Coast, Soubré Region

## **Project status:**

In implementation, exclusive

## **Annual CO<sub>2</sub> reduction:**

Up to 150,000 tonnes of CO<sub>2</sub> in 30 years

## **Situation without project**

Uncertain levels of cocoa production due to Cocoa Swollen Shoot Virus, climate change and low prices

## **Project standard**

## **Partner**

The logo for Migros, featuring the word "MIGROS" in a bold, orange, sans-serif font.

The logo for ECOTOP, featuring a stylized green and blue leaf icon to the left of the word "ECOTOP" in a bold, black, sans-serif font.

The logo for Delica Switzerland, featuring the word "delica" in a white, lowercase, sans-serif font inside a dark blue oval shape, with "SWITZERLAND" in smaller white capital letters below it.

The logo for CABOZ, featuring a red circular icon with two white dots inside, followed by the word "CABOZ" in a bold, black, sans-serif font.

At the same time, smallholders receive training in land use and forest management. This guarantees their long-term earnings from the cocoa plantations themselves, as well as creating additional sources of income from sales of agroforestry products such as avocados and bananas.

### Putting it into practice on the ground

The project is carried out on the ground by the NECAAYO cocoa cooperative, which has been supplying Delica AG with cocoa since 2012. With the support of CABOZ AG the organisational capacity of the cooperative and of the farmers themselves will be strengthened, so that they will be able to carry out the project independently a few years down the line.



### Impressions



Cocoa farmers like Solange Ahou profit from higher income. Photo: Joachim Affian



Small farmers at work in the tree nursery, Ivory Coast. Photo: Joachim Affian



On the left, a DAF field planted in 2022 in direct comparison to the overaged and CSSV-infested cocoa monoculture on the neighbouring field on the right. Photo: Lea Eymann



A cocoa seedling planted a few months ago in a DAF field grows in the shade of a cassava plant. The ring of leaves stores moisture. Photo: Lea Eymann