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### Partners



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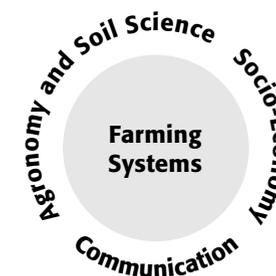


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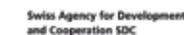


## ORM4Soil – Organic Resource Management for Soil Fertility

Farmer-driven organic resource management to build soil fertility and improve food security



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Laying the plots for the on-station trials in Kenya



Soil sampling in an on-farm trial in Zambia

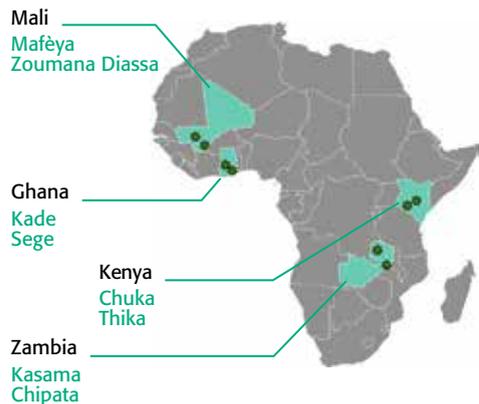


Implementation of the innovation platform at the Sege site in Ghana

## Why organic resources?

The current rates of nutrient depletion, soil erosion and environmental degradation in much of Africa's farmland urgently requires the restoration of soil fertility through ideally suited agricultural management techniques. Farmers and scientists claimed mineral fertilizers alone as inefficient, unaffordable, and lacking sufficient response. This is mainly because of low physical, chemical, and biological soil quality that would buffer against erosion, drought, and nutrient shortage. It has been shown that the use of organic resources in farms over long term has the potential to enhance soil fertility and quality, with positive socio-economic, agronomic and environmental impacts. Increasing the adoption and scaling up such techniques will contribute to achieving food security and improving the well-being of farmers while safeguarding soils, adapting to climate change and promoting the ecosystems' health.

### Two selected project areas per country



Cover: Meeting the farmers during a PRA exercise in Mali

## Agronomic field experiments

Knowledge and opinions of the rural population (collected through participatory rural appraisals or PRAs) were incorporated into the planning of the field work. PRAs were conducted in two sites of each of the four participating countries to better understand the farmers' challenges and opportunities concerning the adoption of soil fertility management techniques. The experience and findings allowed for a deeper dialogue among the local communities, resulting in the participatory identification of suitable soil fertility management techniques in all intervention areas. The selected techniques have a strong focus on the use of local organic resources and agroforestry practices (see table below) and have been channeled into on-farm and station trials, which will be closely followed and monitored by farmers, students, technicians and researchers over the next years in order to evaluate their impact on soil fertility.

Mali	Trials	Agroforestry with Gliricidia; organic fertilizers based on local resources and mineral fertilizer
	Crops	Maize, cotton
Ghana	Trials	Alley cropping; Rates and application mode of manure and compost; Biochar
	Crops	Maize, rice, palm oil and cocoa
Kenya	Trials	Reduced tillage; organic fertilizers based on local resources and mineral fertilizer
	Crops	Maize, legumes
Zambia	Trials	Alley cropping; organic fertilizers based on local resources and mineral fertilizer; modified fundikila
	Crops	Maize, legumes

## Social and Communication Sciences

The PRAs identified the socio-cultural and legislative barriers and helped to engage with relevant stakeholders for the implementation of innovation platforms (IP). The IPs have been established at each site and constitute the base for understanding the societal interactions within the logics of value chains, community preferences, existing development programs and legal regulations. In order to evaluate the impact of the interventions at the level of agronomy, sociology and communication, a baseline survey is interviewing 300 farming households at each site, which will be compared to a final survey taking place at a later stage. The social studies are seen as a fundamental step to better understand the societal or institutional framework regarding soil fertility management, in addition to improving communication strategies to and between farmers.

### Expected outputs:

- › Appropriate, adoptable soil fertility management techniques to farmers
- › Addressing soil governance and influencing the habits and attitudes of farmers and local society towards agricultural sustainability
- › Scaling-up the applied approach from the four countries to the whole of sub-Saharan Africa
- › Providing recommendations to advisory services and farmer organizations, the private sector, community representatives and policy makers for a better adoption of SFM practices
- › Contributing to the resilience of food systems, agricultural productivity, environmental stability and food security