

DEI MEAS

A TRANSITIONING SYSTEM FOR A CHANGE TOWARDS AGROECOLOGICAL PRACTICES



CONTEXT

Agroecology (AE) practices represent a great potential to restore degraded lands, optimize nutrient availability, fight climate change while directly enhancing food security and farmer's livelihood.

By changing their practices towards agroecology, smallholder farmers are directly contributing to soil while enhancing a large set of ecosystem services and co-benefits.

However, when adopting these practices, smallholder farmers face various short-term uncertainties. Their transition toward agroecological practices will take several years and thus, farmers might not risk a transition without financial incentives and technical support.

THE PILOT

Within the framework of the ASSET project, The Department of Agriculture Land Resources Management (DALRM) implements a pilot initiative, called DEI MEAS (Golden Soil in Khmer Language), under the support of Smart Agro, Swisscontact and CIRAD.

The DEI MEAS pilot initiative aims to support the transition towards agroecology and target smallholder farmers. It is based on 3 pillars: Transition- Quantification- Finance.



Pilot Name	Dei Meas (Golden Soil)
Project	Agroecology and Safe food System Transitions (ASSET) in Safe food
Founder	French Facility for Global Environment (FFEM)
Location	Battambang province, Cambodia
Lead Executive Agency	Cambodia Department of Agricultural Land Resources Management (DALRM)
Partners Project Developer	SmartAgro, CIRAD and Swisscontact
Duration	2022 - 2024 (3 years)

THE 3 PILLARS

- 1 Provide support to smallholder farmers to access and implement agroecological practices with a transparent reward system,
- 2 Implementing a precise and cost-effective MRV system, testing different innovative technologies to quantify soil carbon sequestration, greenhouse gas emissions reduction, and the impacts on soil biodiversity and other co-benefits,
- 3 A financial mechanism exploring access to markets for credits ensuring a sustainable business model for the initiative and its replicability.



Transition:

Once registered in DEI MEAS, smallholder farmers i) have a facilitated access to agroecology assets (cover crop seeds, appropriate-scale mechanization, local private sector, and ii) receive trainings and technical assistance to ensure successful AE practice implementation related to their cropping systems (cover crops choice and management, green sowing, AlternateWetting and Drying (AWD), crop diversification...), provided by local partners (PDAFF, R4D/TA-AGRI WAT4CAM, CARDEC...).

The verification of the successful implementation of the AE practices will be conducted through direct field inspections and a practice scoring system. At the end of the season, once the AE practices verified, the rewards are distributed, to farmers.

Quantification:

During the DEI MEAS pilot, the impacts of the practice transition on soil organic carbon dynamic (carbon sequestration, GHG emissions reduction) and ecosystem services (nutrient-use efficiency, halting soil erosion, enhancing soil biodiversity) are quantified using a large set of tools such as Biofunctool^{®1}, infra-red spectroscopy, carbon modeling, and remote-sensing imagery. These tools are calibrated, tested and compared to obtain a precise but cost effective MRV protocol adapted to the Cambodian context (tropical climate, smallholder farmers...).

Financing:

The quantification of AE impacts and co-benefits allow their recognition as "measurable outcomes" and thus, their potential certification (voluntary carbon markets (VCM), eco-credits, food labels, NDC, Cambodian's national commitments on land degradation, biodiversity, and climate change...), attracting investors and off takers, willing to finance smallholder farmers' transition toward agroecological practices.

RESULTS

By the end of the pilot, a 3 pillars system (transition, quantification, financing) shall be created, monitored by a steering committee, led by the GDA/DALRM, incentivizing smallholder farmers' toward agroecological practices and allowing international certification and recognition of these practices' impacts and co-benefits.

OUTCOMES:

- Sustainably increasing agricultural productivity and incomes;
- Improving smallholder farmers' resilience to climate change;
- Maintaining or enhancing soil fertility, water resources, and other ecosystem services;
- Sequester soil carbon and reduce greenhouse gas emissions.

Map of the two location of the Dei Meas Pilot

