

Welcome to PrAEctiCe

Presented by: XXXXX | XXXXX
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**Funded by
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PrAEctiCe

Potentials of Agroecological Practices in East Africa with a focus on Circular Water-Energy-Nutrient Systems



State of the Art

The East African Community has made significant progress in advancing Agroecology (AE) and sustainable food systems. However, there are *challenges and barriers* to the transition to AE, such as:

- Detailed provisions in strategy documents and investment plans privilege industrial agriculture approaches.
- AE in East Africa is highly diverse, and identifying effective AE farming methods takes much work.
- Difficulties such as low or no access among farmers to appropriate extension services.
- Pro-AE policies that are not implemented.
- Influx of synthetic agricultural inputs such as fertilisers and pesticides and industrial farming methods promoted to increase cash-crop production by governments and private companies.

Overall aim of PrAEctiCe

PrAEctiCe will provide a novel Agroecology Indicator Set for East Africa, aimed at helping smallholder farmers in their agroecological transition.



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Objectives

- Identify the most promising **agroecological approaches** for East African farms.
- Provide **evidence that circular water-energy-nutrient systems of integrated aquaculture-agriculture are among the best practices for East Africa** to address climate change issues while increasing financial viability.
- Provide suggestions and help smallholder farmers in their agroecological transition.
- To provide a **novel agroecology indicator** set focusing on circular water-energy-nutrient systems of integrated aqua-agriculture for **smallholder farmers**.

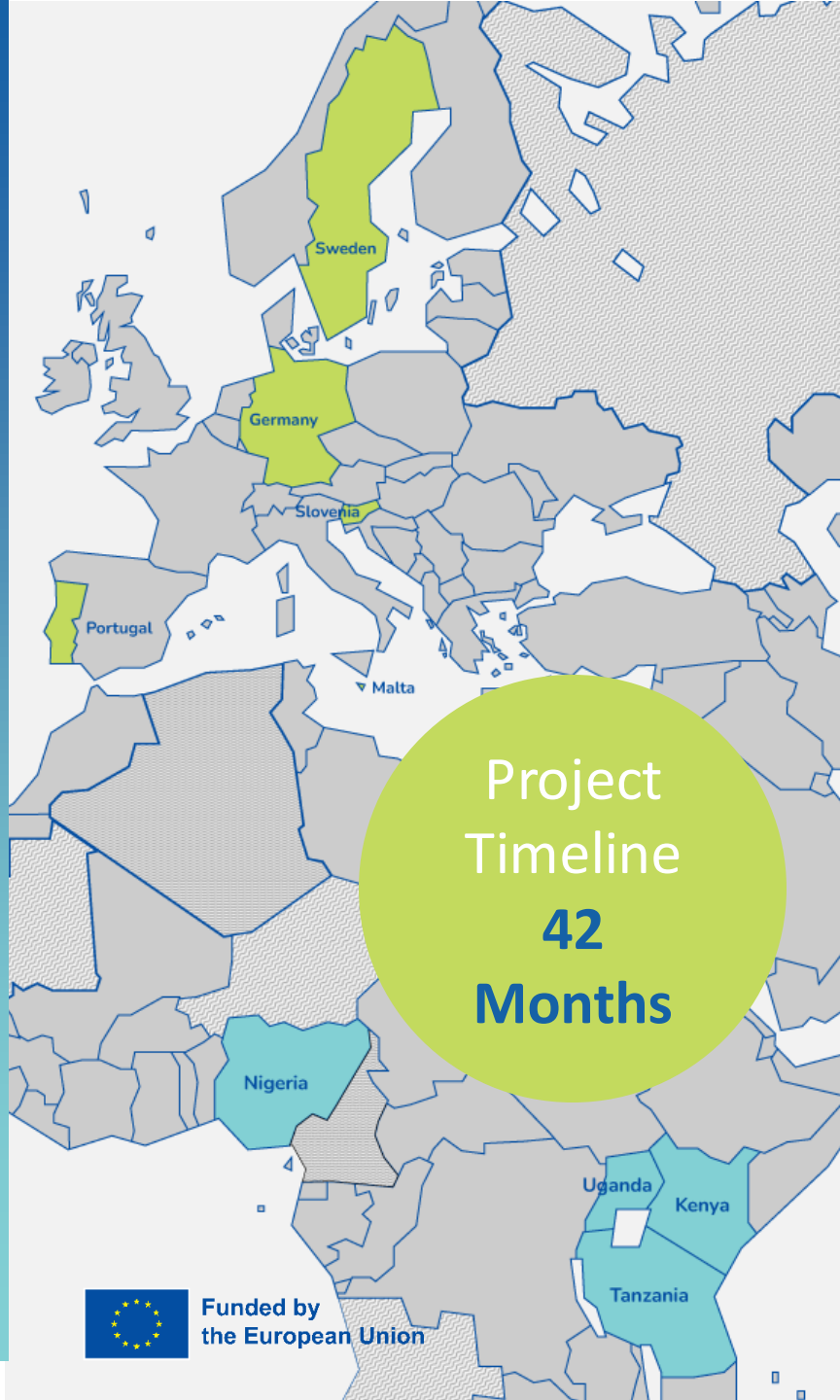
How will PrAEctiCe do this?

1. Co-creation activities
2. Living Labs
3. Training
4. Decision Support Tool



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Countries Involved in the project:

Europe: Portugal, Malta, Germany, Slovenia, Sweden

Africa: Kenya, Uganda, Tanzania, Nigeria



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Co-creation activities

Placing the needs of farmers at the centre by involving them in research and the evaluation of results.

Activities with local stakeholders will be developed to yield the best possible outcome:

- Co-creation workshops (on PrAectiCe's indicator framework and users' stories)
- Online training courses
- On-site pieces of training in PrAectiCe's living labs
- Student exchange programs
- Business event for young agricultural entrepreneurs
- Online surveys with stakeholders



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Living Labs

Three Living Labs

1. Three Living Labs are **action-based projects** that optimise water, energy, and nutrient use in **three different Integrated aqua-agriculture systems**.
2. They will produce data for validation of the Decision Support Tool.
3. The general public and other key stakeholders will have an opportunity to visit the sites and enjoy the food grown on the farm during an open-door day organised within PrAectiCe.



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Living Labs

Where are they located, and what will they focus on?

Living lab 1: Aquaculture and intercropping (Kisumu, Kenya).

In this pilot, aquaculture wastewater will be reused to irrigate intercropping systems, and aquaculture sludge will be used as fertiliser.

Living lab 2: Aquaculture and hydroponics (Kajjansi, Uganda).

The aquaponic living lab will consider several combinations of fish and vegetables with varying water, energy and nutrient needs which will be piloted to optimise the water-energy-nutrient resources.

Living lab 3: Fish-poultry integrated systems (Morogoro, Tanzania).

The setup will also include vegetable production by using aquaculture sludge and poultry manure to improve soil health, and wastewater from fishponds will be used for irrigating vegetables.



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Decision Support Tool

A guiding tool focussed on data collection and practical approaches to farmers' challenging situations.



Will be available in the form of 3 applications:

Mobile app for farmers, a desktop application for advisors and backend for data specialists

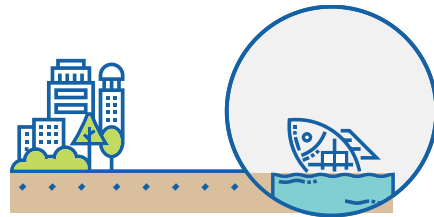
DST Scope: Level 1

Increase the efficiency of recognising industrial inputs, mapping out and collecting data on agroecological techniques.



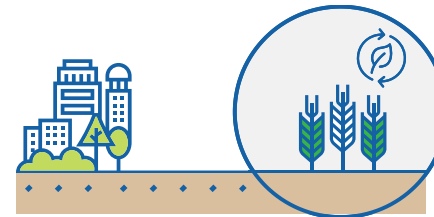
Level 2

Substitute old practices and inputs with new farming practices, classified and recognised, and with the classification of environmental events (water usage, degradation, etc.)

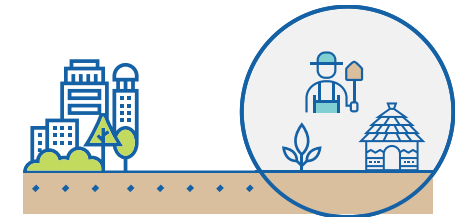


Level 3

Redesign the agroecology system, realising simulations and predictions of socio-economic and environmental impacts of the previously examined farming practices.



The 4th and 5th levels will address the consumer perspective, addressing the efficiency of the system's performance and analytics.



Training

Why?

- Helping farmers get the support they need.
- Building knowledge at a local level.
- Guiding them in the transition to sustainable food and agriculture.

How will PrAECTiCe do so?

- A method will be followed similar to those developed By NGOs that train agroecological practices in sustainable development.
- The farmers' representatives are taught, which then go ahead and prepare, transfer knowledge and share methods with the farmers.
- On-site training for integrated aqua-agriculture will be made available to provide practical solutions for developing agroecological practices.
- Three Living Labs in East Africa will be involved in this training process.



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