



PrAEctiCe
Online
Agroecology
Summit 2024
17 October 2024





Agroecological Innovations for Soil Health and Smallholder Empowerment

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MAIN AGRICULTURAL CHALLENGES:

- ❑ Soil degradation
 - Soil erosion and loss of fertility.
 - Contamination by agrochemicals.
 - Deforestation and loss of biodiversity.
- ❑ Climate Change
 - Prolonged droughts and erratic rains.
 - Changing rainy season patterns.
 - Increase in average temperature.
- ❑ Dependence on Subsistence Agriculture
 - Vulnerability of small farmers.
 - Persistent food insecurity.
 - Vulnerable groups: women and youth.





CIRAWA

Agroecological Solutions for Resilient Farming in West Africa

CIRAWA is developing new agroecological-based practices that build on existing **local and scientific knowledge** to help create more **resilient food supply chains**.

CIRAWA aims to demonstrate how working with nature can enhance **ecosystem health and biodiversity**, while improving local **livelihoods** and **climate resilience** using four key agroecological approaches.

1. **Valorisation** of agro-wastes and bio-based fertiliser production.
2. Production of **high quality seeds**.
3. Saline soil reclamation through **phytoremediation**.
4. **Soil fertility, water and crop** management practices.



CAPE VERDE



GHANA



SENEGAL



THE GAMBIA



Funded by the European Union



16 partners
9 countries
54 months
8 case-study

How will effective implementation be ensured?

- **Definition of the farmers and communities' requirements and needs**
Consultation process through farmer interviews, key informant interviews and focus groups
- Selection of **100 plots (25 per country)** where selected agroecological strategies and techniques will be implemented following a **Living Lab approach** and engagement of **2000 farmers**
- Strong collaboration between farmers so as to combine **Scientific and indigenous knowledge**
- **Soil fertility studies:** soil analysis to identify nutrient deficiencies, soil problems → fertility recommendations
- **Combination of different agroecological practices**, adapted to each case and evaluation of synergies
Most suitable agroecological practices adapted to specific local conditions



Soil Health Agroecological Solutions

- **Saline soil reclamation:**
 - Phytoremediation with *Acacia ampliceps* combined with soil amendments
 - Characterisation of **microbial communities** in saline soils
- **Agro-residue valorisation**
 - Evaluate their potential use as bio-products such as vermicompost and fertilizer, fuel for energy production and construction material
- **Quality seeds production:**
 - New seed coating techniques with fertilisers to improve soil fertility
 - Saline-adapted rice varieties
- **Decision Support System:**
 - Easy-to-follow, customised advices on fertilisation, irrigation and **recommended agroecological practices**

Supporting Smallholder Farmers in the agroecological transition

❖ Best practices integration platform for data analysis and knowledge sharing

- Guide with different agroecological practices
- Use of the platform by farmers and technical staff

❖ Trainings

- Focus on youth and women

❖ Circular economy model and local production

- Waste and seed inventory

❖ Economic, social and environmental assessment

- Assessment of the results of the implemented agroecological strategies from social, economic and environmental perspective towards optimization



Key points

+10%
yields

+20%
organic
matter in
soils

-5%
production
costs

- ✓ **Improving soil parameters by adopting agroecological practices**

Training in agroecological practices

- ✓ **Awareness-raising**

- ✓ **Support in the transition**

Case studies and data → Living lab approach

- ✓ **Give tools for autonomous decision making**



Importance of collaboration between farmers, researchers and local communities to ensure long-term adoption of these sustainable practices

Thanks!



Let's grow together!



CIRAWA