

AFRICAN UNION SOIL OBSERVATORY

Locations Cabo Verde, Cameroon, Central African Republic, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Senegal, Tunisia, Zambia, Zimbabwe

Dates 01/07/2025 - 30/06/2030

Summary

Healthy soils are essential for food production, biodiversity and livelihoods, yet soil degradation and gaps in accessible data make it difficult to monitor and manage soil health across Africa. The African Union Soil Observatory (AUSO) project is developing a continental observatory, including an African Soil Data Centre and a soil health dashboard. Working with partners in 12 African countries, it will bring together soil data and support evidence-based decisions. CABI leads work to understand the conditions needed for the observatory to succeed, the user expectations and to develop a data strategy for sharing and managing soil information over the long term.

The problem

Soil degradation threatens agricultural productivity, biodiversity, water regulation and livelihoods across Africa. Climate change and unsustainable land management add to the pressures on soils, with consequences for food security and rural communities. Women and young people can be particularly affected by these pressures.

Reliable soil information is essential for understanding where problems occur, tracking changes and deciding which actions are needed. Yet soil data is often scattered across institutions, difficult to access or incomplete. Differences in data standards, policies, technical capacity and permissions can also make it difficult

to combine and share information.

National institutions and decision-makers need a clearer picture of soil health and practical ways to use evidence. A coordinated continental approach can help connect existing knowledge, address gaps and support countries to make informed decisions on soil and land management.

What we are doing

The project aims to establish the African Union Soil Observatory as a continental resource for monitoring soil health and supporting sustainable land management. It will develop an African Soil Data Centre and a soil health dashboard, building on the Soils4Africa soil information system and other initiatives. The observatory is intended to be owned by the African Union Commission and managed by the Forum for Agricultural Research in Africa (FARA).

Partners will consolidate soil information, address data gaps, strengthen national capacity and support national soil health strategies. Stakeholders are helping shape the observatory so that its services respond to practical needs.

CABI leads on stocktaking and the enabling environment. This assesses the conditions needed for the observatory to succeed, contributes to the review of data policy and leads development of the idealised system design and data strategy. This work addresses governance, data sharing, access and long-term sustainability, guided by the FAIR principles: findable, accessible, interoperable and reusable.

CABI also plays an important role on stakeholder engagement and communication, working with FARA and consortium partners on dissemination, exploitation and communication activities. Its contribution links stakeholder insights with system development and supports communication, engagement and uptake of project knowledge. CABI also contributes to project data management planning.

Results so far

The project has produced a foundation of evidence, design and engagement outputs during its early implementation. After conducting an enabling environment assessment for 12 African countries CABI led the idealized system design and prepared the data strategy for AUSO and the African Soil Data Centre. These set out the proposed system and the arrangements needed to govern, share and maintain soil information over the long term.

Working with consortium partners, CABI has also contributed to the policy environment review, stakeholder map and stakeholder needs assessment. The needs assessment drew on a multilingual survey of 117 respondents and identified priorities and barriers that inform the observatory’s design.

CABI contributed to the first Stakeholder Engagement Plan, helping establish an inclusive approach to participation, feedback and knowledge uptake. Together, these outputs connect stakeholder needs, policy considerations and technical development.

The next phase will focus on putting these foundations into practice as the observatory develops, supporting national data contributions and strengthening capacity, communication and stakeholder feedback. The data strategy and engagement arrangements will evolve as implementation progresses.

Partners

ETH Zurich, Hungarian University of Agriculture and Life Sciences (MATE), Department of Research and Specialist Services, Zimbabwe (DR&SS), Zambia Agriculture Research Institute (ZARI), Ministry of Agriculture and Food Security, Malawi, Kenya Agricultural and Livestock Research Organization (KALRO), FOFIFA, Madagascar, Instituto Nacional de Investigação e Desenvolvimento Agrário (INIDO), Ministry of Agriculture, Ethiopia, Institut Centrafricain de la

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