

Csizmadiáné Dr. CZUPPON Viktória / Viktória, Csizmadiáné Dr. CZUPPON
egyetemi docens/ Associate Professor
Gazdaságtudományi Kar / Faculty of Business Economics
Telefonszám: 06 30 368 01 75 / Phone number: +36 30 368 01 75

E-mail: czuppon.viktoria@gtk.uni-pannon.hu

E-mail: viktoria.czuppon@gmail.com

<https://uni-pannon.hu/>

Summary for **Boost4AfricaSOIL**

Topic ID: Assessment of Soil Health in Africa: HORIZON-MISS-2024-SOIL-01-09

The aim of **Boost4AfricaSOIL** is to provide enhanced and accessible data for policy makers and intergovernmental organizations to create a continent-wide 'convergence of evidence' map identifying areas in Africa likely affected by soil degradation processes, similar to the EUSO Soil Health Dashboard implemented for Europe, with use of AI.

We plan to increase access to knowledge for a wide range of stakeholders to inform soil and land management policies and practices, prioritize areas for intervention and research, and improve advisory services for farmers across Senegal and Chad firstly, and prepare a wider implementation possibilities for the other countries in Africa.

We will improve datasets on soil threats and properties to support the development of an interactive Soil Health Dashboard specific to the DEMO sites, such as Senegal and Chad, with a long-term sustainability plan.

Activities will also contribute to the EU-Africa Partnership on Food and Nutrition Security and Sustainable Agriculture, African Union strategies, initiatives, and action plans relevant to soil health. They will also support global commitments and Sustainable Development Goals (SDGs), particularly in the areas of sustainable agriculture, food and nutrition security, biodiversity, and special focus on climate.

Planned activities:

- Define use cases and indicators through stakeholder consultation; develop a functional design of the soil information system (SIS); create detailed procedures and tools for field activities and collect 1000 soil samples. Establish detailed procedures for laboratory work and analyse the collected soil samples at a reference laboratory in Chad; and develop the technical infrastructure for the soil information system and provide results as open data linked with open EO data.
- Fostering functional ecosystems, because the soil information system (SIS) is a tool to target interventions that improve soil quality and provides insight in the impact of these interventions.
- Addressing climate change and resilience on land and sea, as the soil information system will contribute to the assessment of carbon losses from soil and the identification of areas with high potential for soil carbon sequestration. Finally, the soil information system provides a platform for the development of sustainable business models by service companies aiming at the development of sustainable food systems.
- Mapping the degraded soil territories, the suboptimal land use, arranging trainings and workshops with the community leaders, in order to boost the farmers' competition.

- Data gathering about pollution, compaction, biodiversity, nutrient status, acidity/acidification, soil organic matter, soil erosion, soil water, in order to improve the accuracy and functionality of the dashboard through consultative engagement with national stakeholders.
- Identification of local, place based problems and their possible solutions.
- Develop roadmaps to highlight trends in soil health responses to policy instruments.
- Development of national soil health strategies for at least 8 African countries, including the DEMO sites.
- The project demonstrate open access, longevity, sustainability and interoperability of knowledge and outputs through close collaboration with the Joint Research Centre's EU Soil Observatory (EUSO) and SoilWISE and ensure interoperability between the dashboard and other databases (such as national soil information services or the Horizon 2020 project Soils4Africa).
- Building specific tasks on Soils4Africa project.
- Plant protection plan in line with climate change related scenarios.
- Water retention plan for farmers, and other end-users.