Finapp S.P.A.: Soil Moisture Monitoring for Precision Irrigation Over Large Fields

Smart soil moisture monitoring for improved water-use efficiency, crop performance, and climate resilience.

Finapp Soil Moisture Probe uses cosmic ray technology to provide real-time soil moisture monitoring across large agricultural areas. The technology supports climate-smart irrigation, improves water-use efficiency, and helps build resilience to drought and climate variability at scale.

This technology is pre-validated.

9·7 Scaling readiness: idea maturity 9/9; level of use7/9

Inclusion assessment 14 10 18

Climate impact 7

Problem

- Climate shocks and drought can reduce staple crop yields by **30% to 80%**.
- Poor irrigation management can waste up to **40%** of agricultural freshwater resources.
- Many farmers lack reliable data to support effective irrigation decisions.
- Water stress reduces the resilience of farming systems and rural livelihoods.

Solution

- Improve resilience to climate variability through seven-day irrigation forecasting.
- Promote sustainable water management with real-time soil moisture monitoring.
- Support evidence-based irrigation decisions.
- Increase crop productivity by **15% to 20%** and strengthen food security.

Key points to design your program

Smart Soil Moisture Monitoring can be integrated into climate-smart agriculture, water management, food security, and drought resilience programs to improve irrigation decisions, conserve water resources, and strengthen climate resilience. Its adoption contributes to **SDG 2 (Zero Hunger), SDG 6 (Clean Water and Sanitation), SDG 13 (Climate Action), and SDG 15 (Life on Land).**

To integrate this technology into your project, plan and budget for the following activities and prerequisites:

- Facilitate access to soil moisture probes, monitoring platforms, and advisory services.
- Build partnerships with Finapp, research institutions, irrigation agencies, extension services, and development partners.
- Train farmers and extension agents on soil moisture monitoring, irrigation scheduling, and data-driven farm management.
- Promote women's and youth participation in digital agriculture and climate-smart irrigation services.
- Monitor water savings, irrigation efficiency, crop productivity, drought resilience, and technology adoption.

IP

Patent granted, Trademark

Finapp S.P.A.
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Commodities

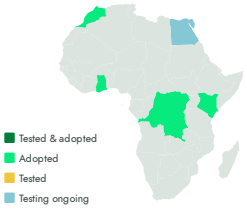
Maize, Wheat, Cassava, Common bean, Soybean, Cowpea, Groundnut, Sesame, Mango
+ 3 more

Sustainable Development Goals

Categories

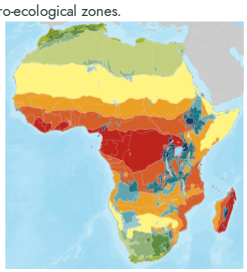
Production, Pre-production, Equipment, Water management

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.



Target groups

Development institutions, Farmers, Governments, Sellers, Manufacturers, Researcher center, Soil scientists, Cooperatives and Agribusinesses
+ 2 more