



PeaceEye



SOS CHILDREN'S
VILLAGES
SOMALIA

Smart Farming

BACKGROUND



Rain-fed & pastoral



River-fed farming zones



Core crops & livestock



Children facing malnutrition

Agriculture is vital to livelihoods and food security in Somalia, but farming is highly vulnerable to drought, water scarcity, and climate variability.

These challenges are intensified by a severe humanitarian crisis, with 6.5 million people facing high acute food insecurity, 1.84 million children affected by acute malnutrition, and 3.3 million people internally displaced.

This highlights the need for better data to support agriculture, water management, and climate adaptation.

THE CHALLENGE



pH balance



Salinity



Soil depth



Organic matter content

While short-cycle vegetables perform well, several fruit trees and high-value crops show poor establishment, weak growth, or high mortality.

A key challenge is the limited understanding of how local soil conditions — including fertility, pH, salinity, soil depth, organic matter, and micronutrients — affect crop suitability and performance.

This can lead to poor crop selection, reduced nutrient uptake, and lower productivity.

THE SOLUTION



SATELLITE DATA

Soil Suitability
(SOC, Moisture, Salinity)



WEATHER DATA

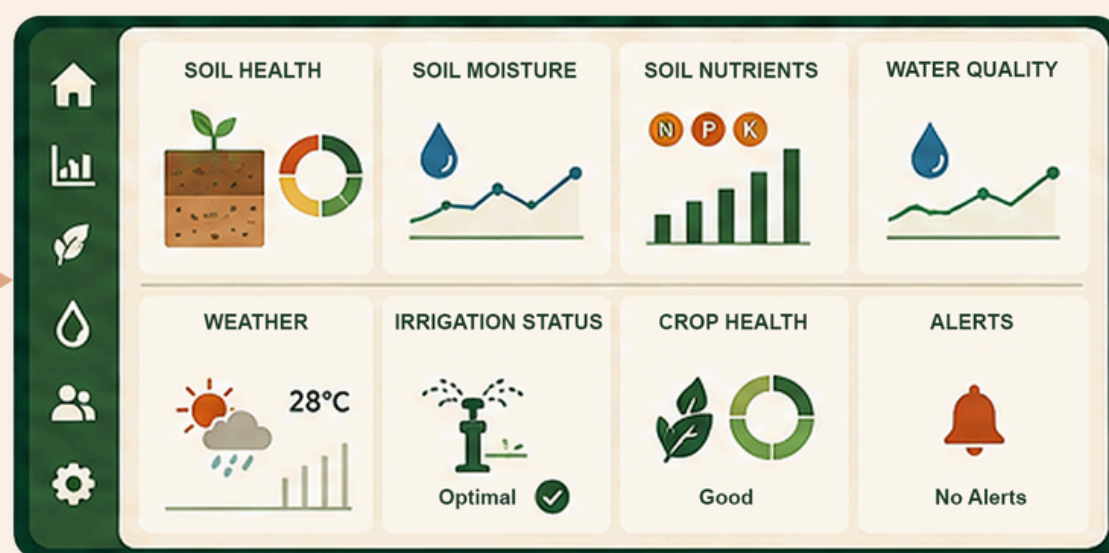
Rainfall, Temperature,
Humidity, Wind



DRONE DATA

Crop Health, NDVI,
Field Monitoring

DECISION SUPPORT DASHBOARD



COMMUNITY BENEFITS

- Real-time insights shared with farmers
- Early warnings and alerts
- Better decisions, higher yields
- Stronger communities, food security

SMART HYDROPONICS

Nutrients monitoring, pH control,
Water circulation, Climate control

IoT SENSORS ON THE FARM

SOIL MOISTURE

SOIL NUTRIENTS

WATER LEVEL

WEATHER STATION

WATER QUALITY



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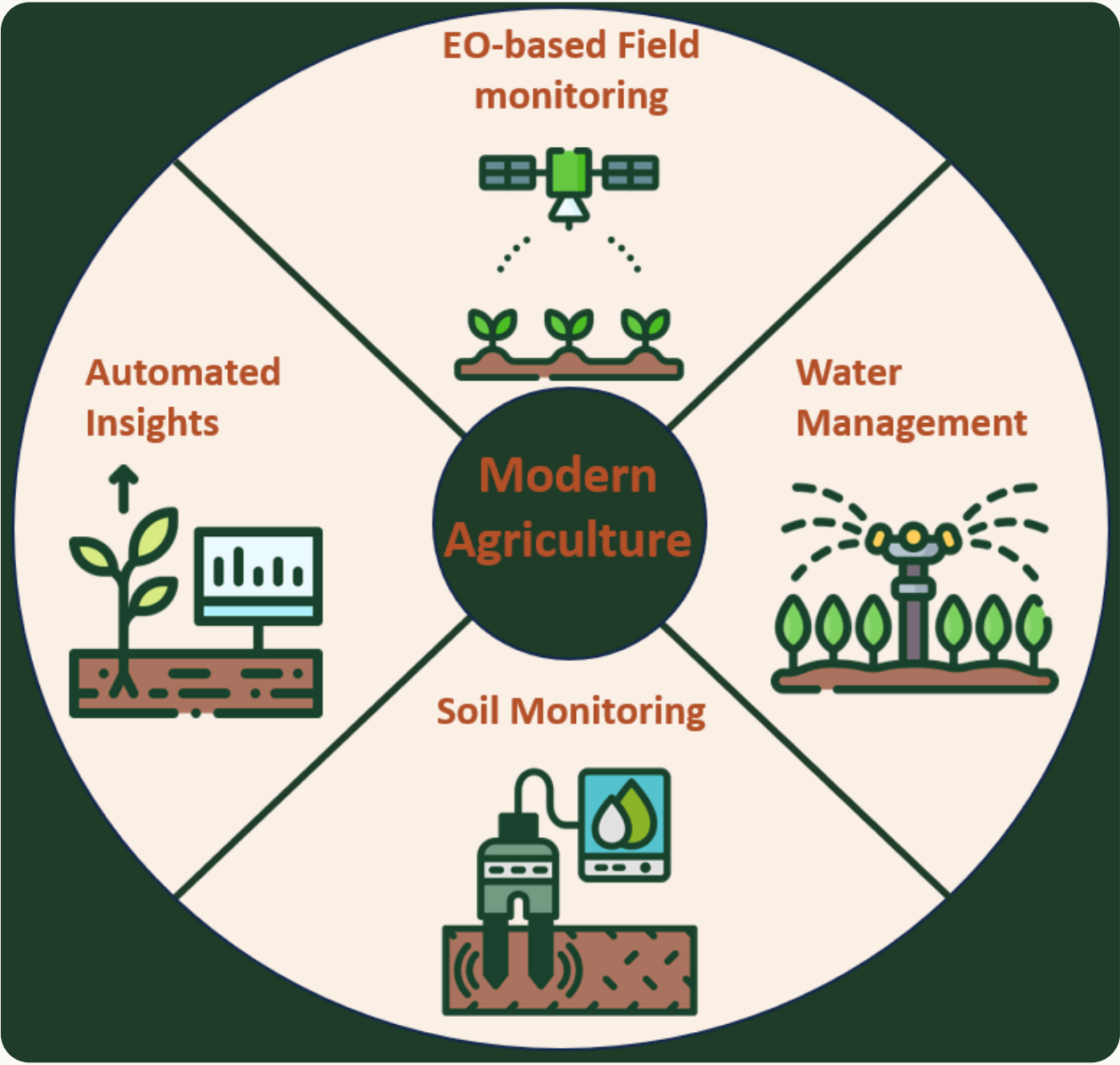
SUSTAINABLE
DEVELOPMENT
GOALS

2 ZERO
HUNGER

16 PEACE, JUSTICE
AND STRONG
INSTITUTIONS

FROM INSIGHT TO IMPACT: Four Connected Technologies

An overview of ongoing services being by implemented PeaceEye FlexCo for SOS-CV Somalia's Flagship farm in Baidoa.





Digital Soil Information & IoT Soil Monitoring
Answers the pre-planting soil-testing gap



Modern Farm Reporting & Forecasting Tool
Yield reporting & disease foresight all in one channel



Water Quality Monitoring System
Preemptive alerts to ground water contamination



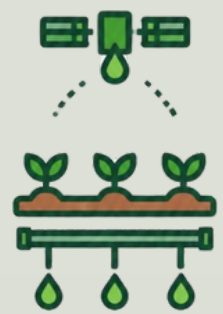
Smart Hybrid Irrigation System
Scales existing drip irrigation, drought-proofed

EXPECTED GAINS

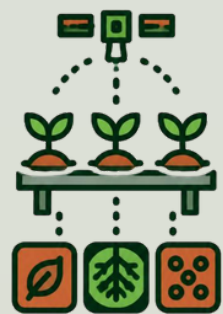
Soil, water, and EO data flow into a single reporting platform — turning SOS CV Somalia's field conditions into real-time decisions



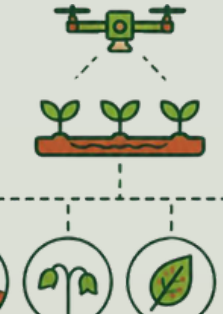
Better crop performance
through improved crop selection based on local soil conditions.



Higher water-use efficiency
through soil-moisture monitoring and smart irrigation.



Improved soil fertility and nutrient management,
with potential to reduce unnecessary chemical inputs.



Earlier detection of risks
such as drought, crop stress, disease, and water-quality problems.



More informed farm decisions
by combining Earth Observation, IoT sensors, AI, and farm-level data.



Greater productivity and climate resilience,
supporting more sustainable farming and food security in Somalia.

PARTNERS



FUNAAB - Federal University of Agriculture, Abeokuta
Provides expertise in soil intelligence, AI, smart farming and irrigation, supporting data-driven crop and soil management.



GeoFarmer - CIAT / GeoCitizen
Provides a digital platform for farm registration, monitoring, climate and EO analytics, and farmer advisory, designed for low-connectivity environments.



Terensis - ETH Zurich spin-off
Provides agricultural risk forecasting by combining Earth Observation, agronomic knowledge and AI to support early warning and decision-making.



Save Our Planet (SOP)
Provides regenerative agriculture technology designed to improve soil fertility, plant resilience, nutrient uptake and water-use efficiency while reducing chemical inputs.