

iSAT: Intelligent Agricultural Systems Advisory Tool for Climate Risk Management and Farm Decision-Making

Turning climate forecasts into actionable farm guidance!

iSAT is a climate information and advisory system designed to support smallholder farmers in managing climate risks through tailored, location-specific agricultural guidance. It combines climate forecasts, crop information, and local farmer knowledge using decision tree logic to generate practical recommendations for both pre-season planning and in-season farm management.



ILRI
INTERNATIONAL
LIVESTOCK RESEARCH
INSTITUTE

International Livestock Research Institute (ILRI)
Jacob Emanuel

Technology from

PRMS

Commodities

Maize, Cowpea, Groundnut, Millet

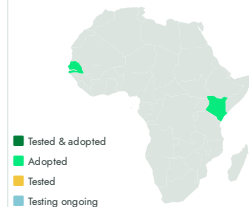
Sustainable Development Goals



Categories

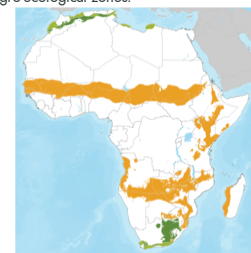
Digital applications, Digital Advisory and Extension

Tested/adopted in



Where it can be used

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



Target groups

Farmers, Advisory and Extension Services, Cooperatives and Agribusinesses

This technology is **pre-validated**.

8·7

Scaling readiness: idea maturity 8/9; level of use 7/9

Inclusion assessment

10

5

6

Climate impact

2

Problem

- Persistent gap in **access to climate information services for smallholder farmers**
- Weak delivery of **usable, practical agro-advisories in low-resource and rural settings**
- Limited scaling of **climate-smart agriculture interventions across regions**
- Difficulty integrating **scientific climate forecasts with local farming knowledge**

Solution

- Scale **climate information services for smallholder farmers in low-resource settings**
- Turn climate forecasts into **simple, practical, farm-level decisions**
- Improve adoption through **multi-channel delivery (SMS, IVR, radio, voice)**
- Combine **scientific and local knowledge** for higher relevance and trust
- Provide evidence on **impact (yields, costs, resilience improvements)**
- Strengthen **climate-smart agriculture programs and food security outcomes**

Key points to design your program

iSAT translate forecasts into practical farm decisions, improving resilience, productivity, and food security.

- Assess climate risks and farmer information needs
- Target vulnerable smallholder farming communities
- Partner with ILRI, meteorological services, telecoms, and extension systems
- Use SMS, IVR, radio, mobile apps, voice messages for inclusion
- Train extension actors and farmers on interpretation and use
- Integrate local knowledge and feedback systems

Key indicators: farmers reached, adoption of practices, yield and cost changes, climate loss reduction, coverage, resilience improvements



Open source / open access



iSAT

<https://taat.africa/ojn>

Enquiries ecatalogs@taat.africa

