

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

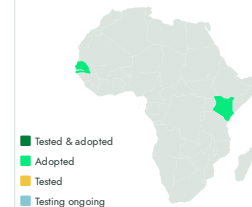
Sustainable Development Goals



Categories

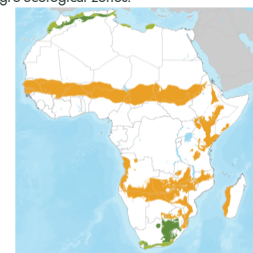
Digital applications, Digital Advisory and Extension

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>

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