



StatEO

5-7 May 2026 | ESA-ESRIN | Frascati (Rome), Italy



From Pilots to Operations: EO for Agricultural Statistics

5th May, 12:15pm – 13:15, Big hall

From Pilots to Operations: EO for Agricultural Statistics

Moderators:

Valerie Bizier Deputy Director Statistics Division (ESS)(Food and Agriculture Organization of the United Nations - FAO)



Lightening talks Presentations: Setting the Stage

- **Raphael D'Andrimont (DG Agri)** Socio-Economic Analyst
- **Lorenzo De Simone (FAO)** Technical Adviser Geospatial – EOSTAT Lead
- **James Thomas (Direction de l'Analyse, de la Prévision et des Statistiques Agricoles, Senegal)** Statistician
- **Sophie Bontemps (Université Catholique de Louvain)** Researcher
- **Zoltan Szantoi (European Space Agency)** Land Application Scientist



Panel Discussions: Insights and Reflections

Same as above

Why Earth Observation is operational for monitoring EU farm payments — but not yet for official agricultural statistics

KEY MESSAGE

1 EO is already operational for farm monitoring

The technology is mature.

Sentinel satellites observe every farm parcel. Cloud computing and unbiased estimation methods are widely available. 10+ years of free, continuous data.

Already operational at scale: the EU farm-payment system (IACS) checks ~€43 bn/year of area-based interventions — farmers declare their activity, Sentinels verify it automatically. DG AGRI is one of the largest civil users of EO.

New EU-wide products: annual crop-type maps at 10 m, grassland, cover crops, bare-soil dynamics.

→ EO is not the bottleneck.

MAIN CHALLENGE

2 The last mile from pixels to policy

- 1 Technical** — from pixels to ready-made indicators
timely • with confidence levels • all crops, not just the easy ones
- 2 Interoperability** — EO + farm registry + farm survey (IFS, FSDN)
shared farm ID • parcel link • once-only principle
- 3 Member State variability** — uneven use of administrative data for statistics
from 87 % in some countries → near zero in others
- 4 Organisation** — who turns policy questions into operational analysis?
policy translation • continuity • dedicated resources

CONCRETE EXAMPLE

3 Crop diversity across the EU

DG AGRI Analytical Brief N°14 (January 2026)

First use of an EU-wide 10 m annual crop-type map (Copernicus) for CAP policy analysis.

Output: country-level and regional crop-diversity indicators, comparable across all Member States.

Lessons learnt:

- not plug-and-play — substantial processing
- continuity needs same algorithms over years
- bridge to admin data is hand-built

Full talk: Wednesday



Food and Agriculture Organization of the United Nations

FAO — ESA StatEO 2026 Conference

From Pilots to Operations

Earth Observation for Official Agricultural Statistics

Lorenzo De Simone, PhD

Technical Adviser (Geospatial) – EOSTAT Team Leader, FAO/ESA-ESS

MoU · European Space Agency

Joint framework for EO in official agricultural statistics

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Country Implementations in collaboration with NSO's

EOSTAT & Sen4Stat



Active Space Agency Collaboration

Senegal

Kenya

Zimbabwe

Rwanda

UN-GGIM Africa

Collaboration with UN Big Data Hub (Regional and Global)



EOSTAT: Making EO Operational

EOSTAT

01

Embedding EO into statistical workflows

Not standalone tools — EO integrated into the full survey cycle: frame, sampling, estimation, dissemination.

02

In-situ data as the backbone

Ground truth collection designed from the start to serve both field surveys and EO validation.

03

Institutional coordination

NSOs, Ministries of Agriculture, and space agencies working together under a common operational framework.

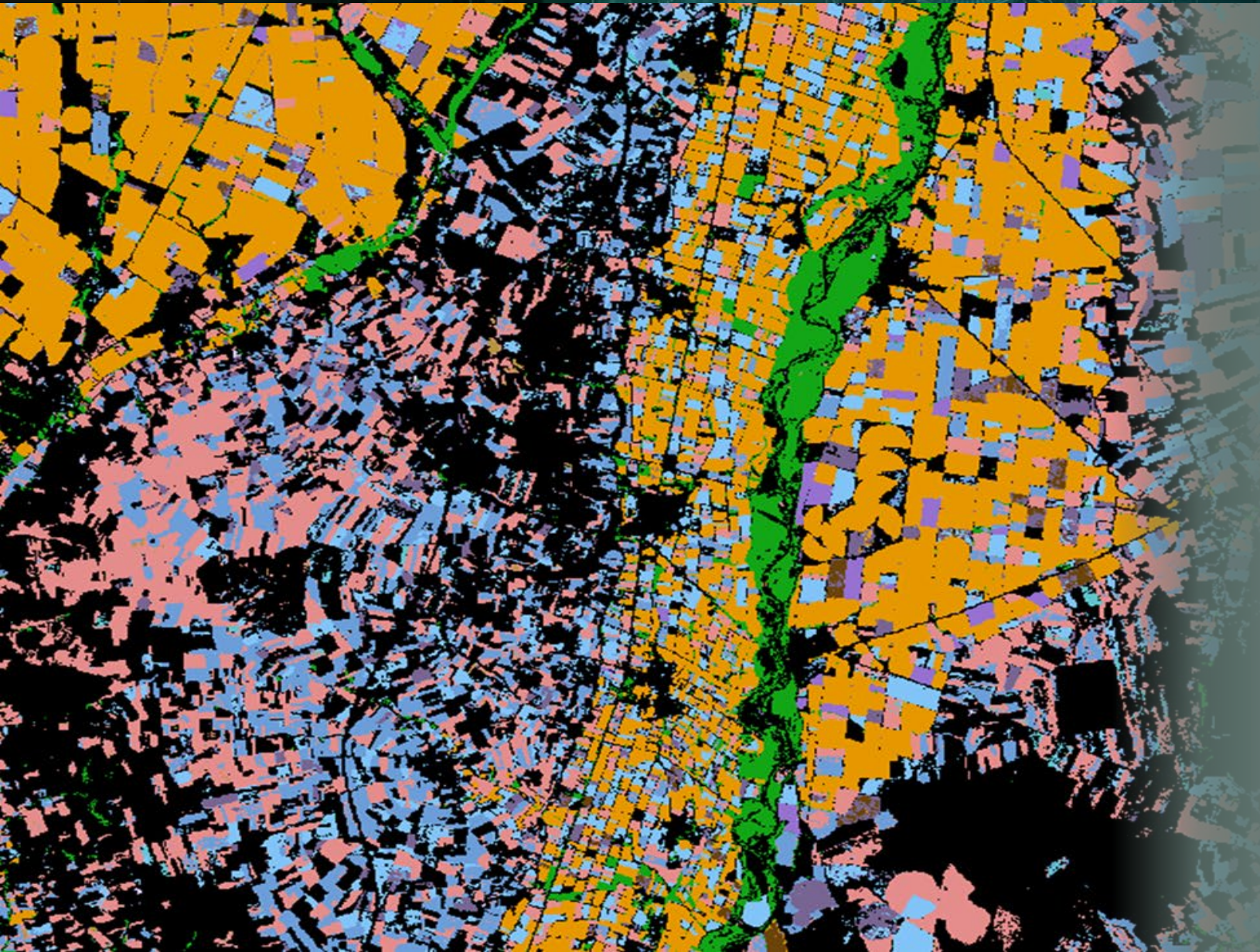
04

From 21+ country pilots — to a replicable model

Lessons from implementation show: the barriers are institutional, not technological.

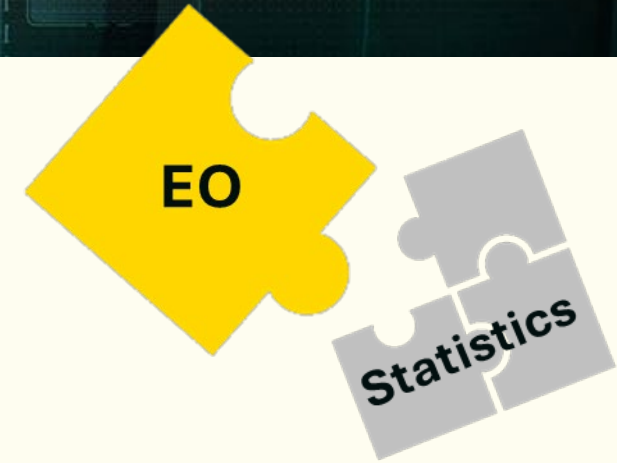
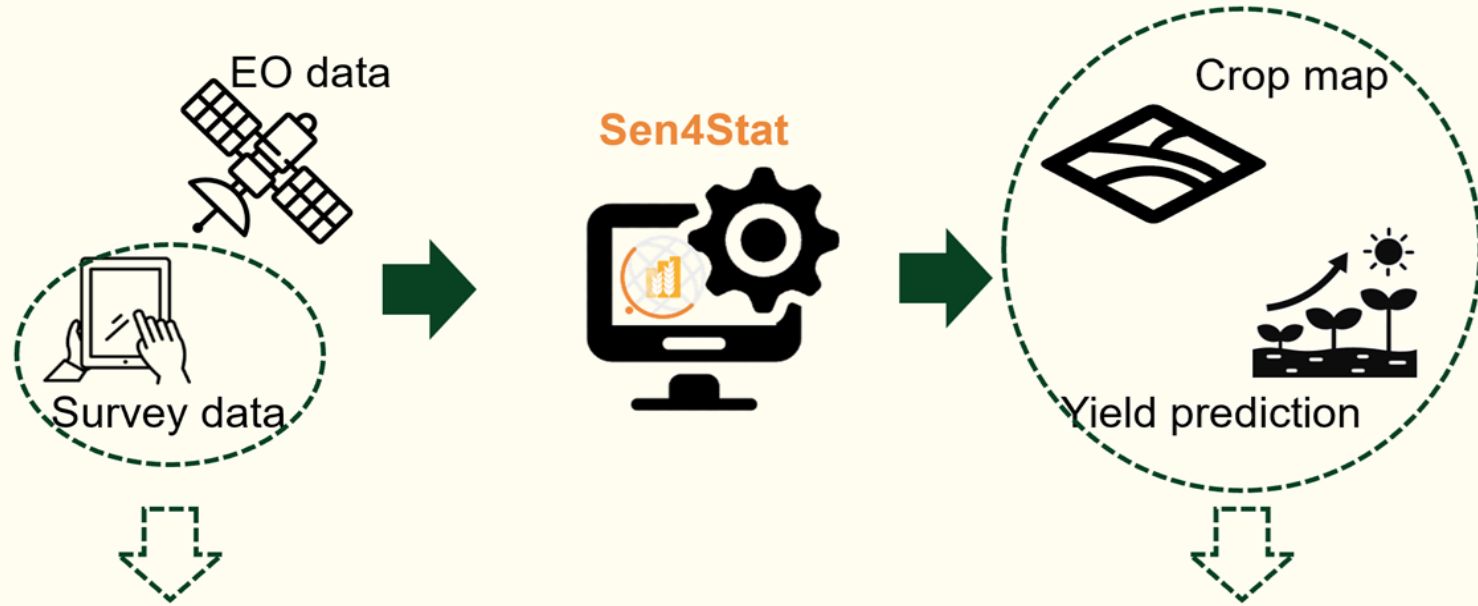
The question is not whether EO works — it's how we institutionalise it.

Maps are not statistics

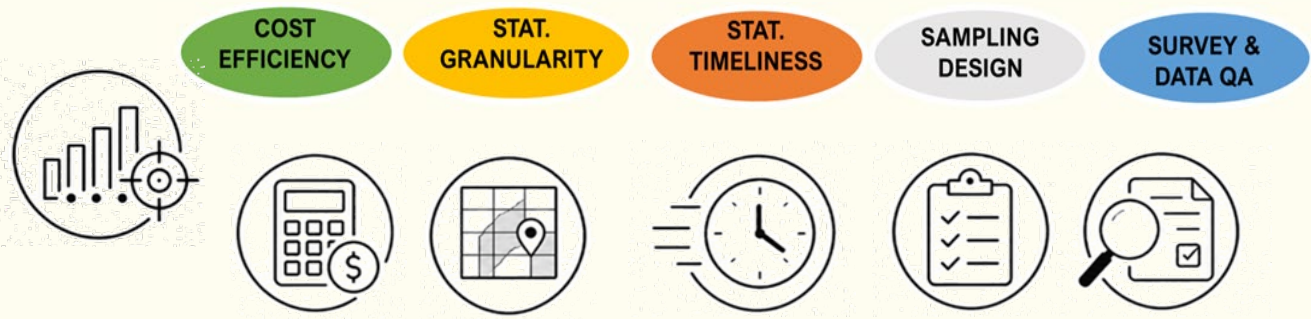


A collection of 12 white icons arranged in a 3x4 grid. The icons represent various data visualization and communication concepts: a checklist, two people talking, a magnifying glass over a document, a line graph, a network diagram, a pie chart, a donut chart, a circular progress indicator, a bar chart, a line graph with an arrow, and another bar chart.

EO as a complementary data sources to survey for improved statistics



Key EO impacts on agricultural statistics



- Oral presentation today, 17h30, big hall
- Hands-on demo today, 16h30, Uliveto meeting room A and tomorrow, 14h30, Science Hub
- Poster on Tuesday

Roadmap and project definition

Drivers

Environmental Agenda, Sustainable Development, Africa 2063



THE GLOBAL GOALS
For Sustainable Development



Feedback to policy

Direct engagement of stakeholders and end-users



Users' needs and proactive engagement

Integration of developed solutions

Excellence in EO innovation with industry and academia



- Building on science element
- Multi-mission and inter-disciplinary

Leveraging on cutting-edge ICT for rapid development and amplification of users



ESA roadmap on Agriculture Applications



2016

2026

