

Since 1992, Telespazio and then e-GEOS have been providing services to AGEA (the Italian Payment Agency)

for the EU-CAP and to Ministry for agro-statistics and forestry services

#### **Target**

EO and SW-GIS components

=> Integrated Administration and Control System (IACS)

6.500.000.000 € to distribute yearly (2 pillars)

1.400.000 farms into farm register,

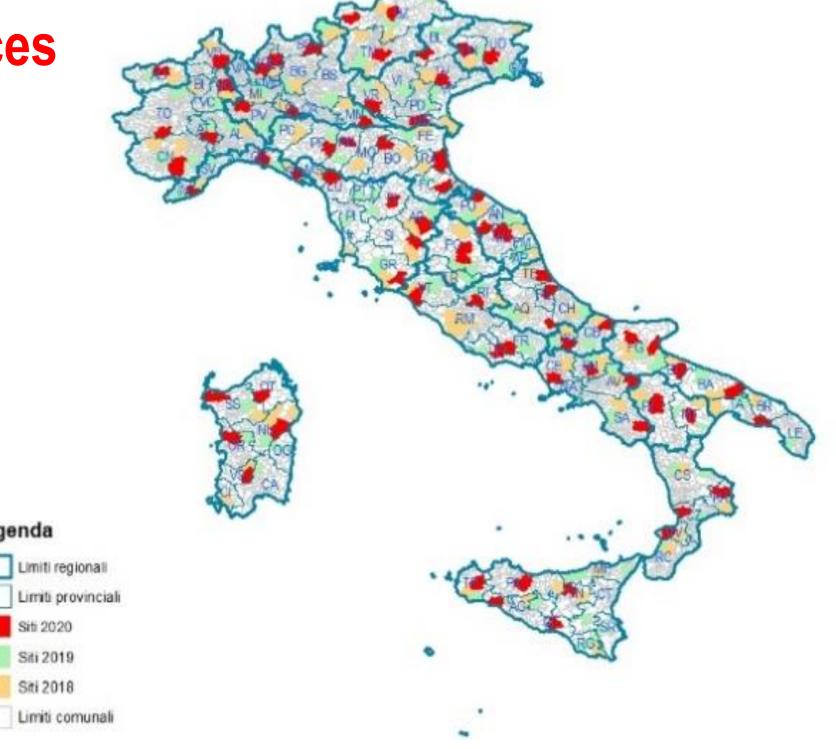
800,000 annual declarations; 12.000.000 M of declared parcels

#### **Main tasks**

- Satellite acquisition and processing (VHR and HR);
- Airborne ortho-photos 20cm, 300,000 skm every 3 year
- Land Parcel Identification System LPIS new semi-automatic updating 1:5,000

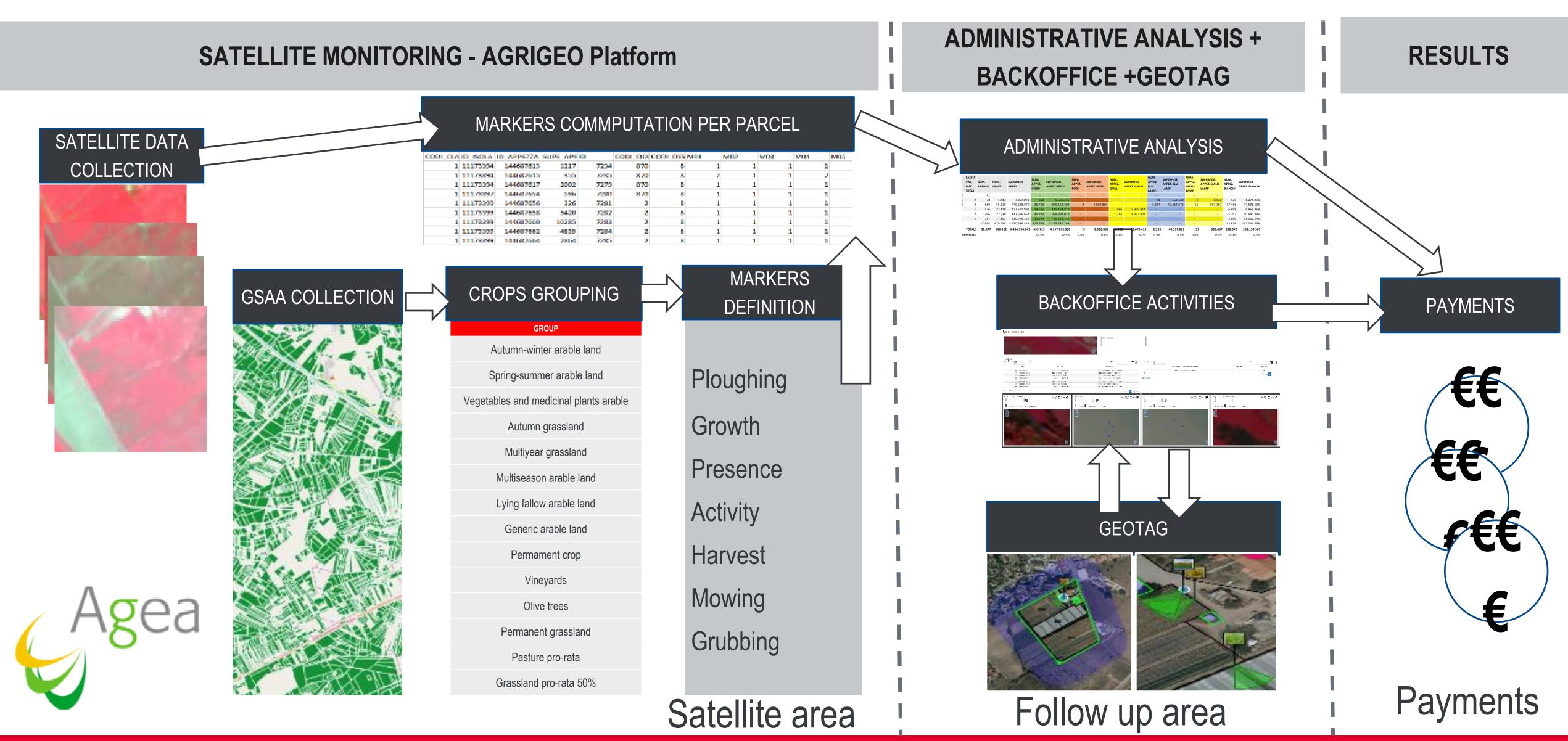
#### Main achievements for AGEA

- Fully use of EO for CAP since 2006 (100% of sample) –first in EU
- Checks by Monitoring CbM through multi-temporal automatic flow of Sentinel first in EU since 2018, in progress



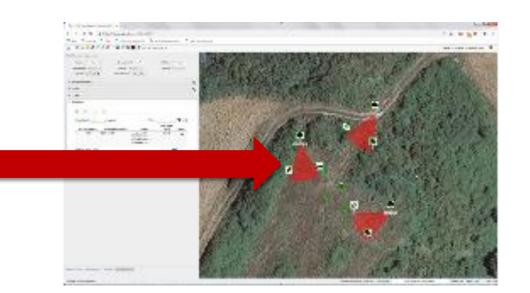
CbM exploits the e-GEOS platform AGRIGEO for land and natural resources monitoring

## CAP CbM monitoring – the complete e-GEOS workflow for AGEA



## eGEOS « Geotag App » on phone mobile Secure, protected and guaranteed "in-field" photos

Operational photo cones acquired



#### Needs

Secure tool to avoid frauds or manipulations, through a low cost device for precise and verified in-field proofs

#### **Applications**

App for both surveyors and/or farmers

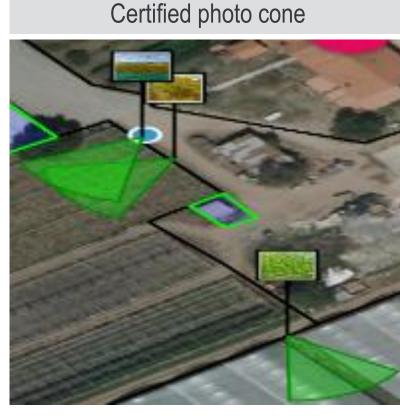
- Time and date from satellite, not only by device
- On-line and off-line capability (matching through sequential codes)
- GNSS tracking capability in different modes, including "walking"
- High accuracy in positioning through **Galileo EGNSS4CAP** by GSA

#### **Availability**

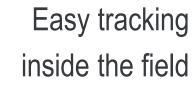
Operational activities since 2018 for CbM; open in Italy through AGEA for Paying Agencies















Digital signature &

facial recognition

## Where the EU CAP services are going?

#### The CAP mainly focused to:

- Avoid urban crowding and population confluence from the countryside: OK
- Assure local and EU **own food production**, avoiding the excess of imported primary goods (or food destruction): **OK**
- Maintain the defense and improve the **environmental safeguard**, particularly for the climate changes fighting: **PARTIAL**, especially for envi-climate results, even if agro-carbon footprint since 1990 got a 20% reduction (unique economic sector in the world)

#### New targets addressed to farmers and EU citizens by the next CAP:

- Precision and organic farming expansion,
- CO2 > absorption,
- Improve the recovery of biodiversity

#### What does this new goal need?

- A continuous mutual support and interaction among:
- Public Institutions (P. Agencies, EU DGs, JRC, ESA, GSA) & Scientific entities and their achievements; Industry and their challenging propositions



## The next new scenario, leveraging on a complete EO agro-monitoring by the CAP

Expand a > benefit/costs EO agro-services to:

medium-small farms, insurances and local professionals

Offer, at marginal costs, further geoinformation tools

(also by intermediate products) for:

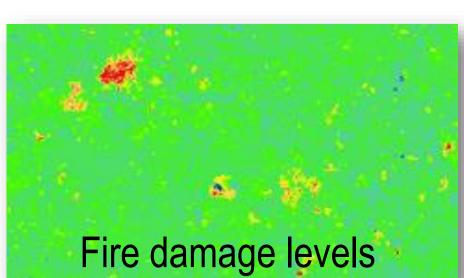
CO2 adsorption fluxes calculation and ecosystem status, forest fires,

legal/illegal clear cuts, flooding, water provision, disaster management

In synthesis..."to deny an oxymoron":

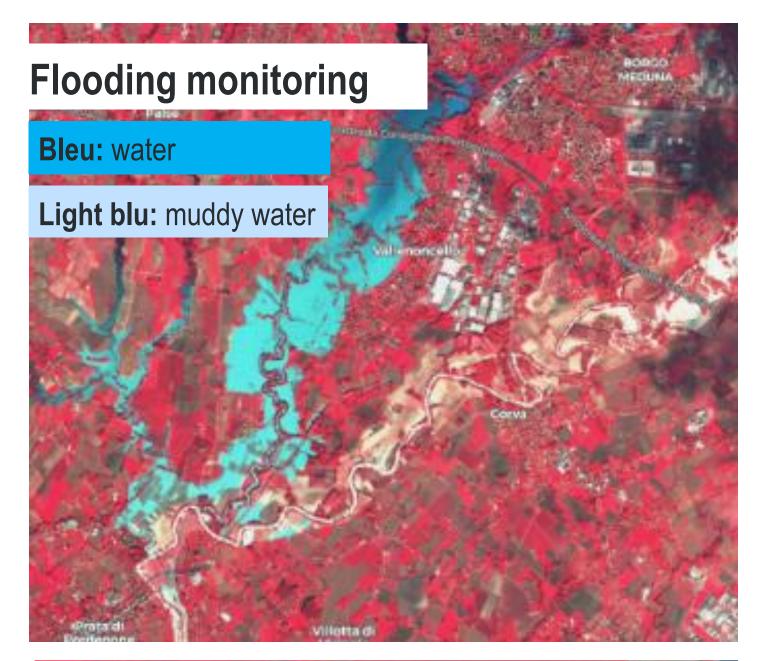
safeguard both the vital-healthy agronomic business and our living environment







Sentinel NRT possible products as "other outputs" of AGRIGEO

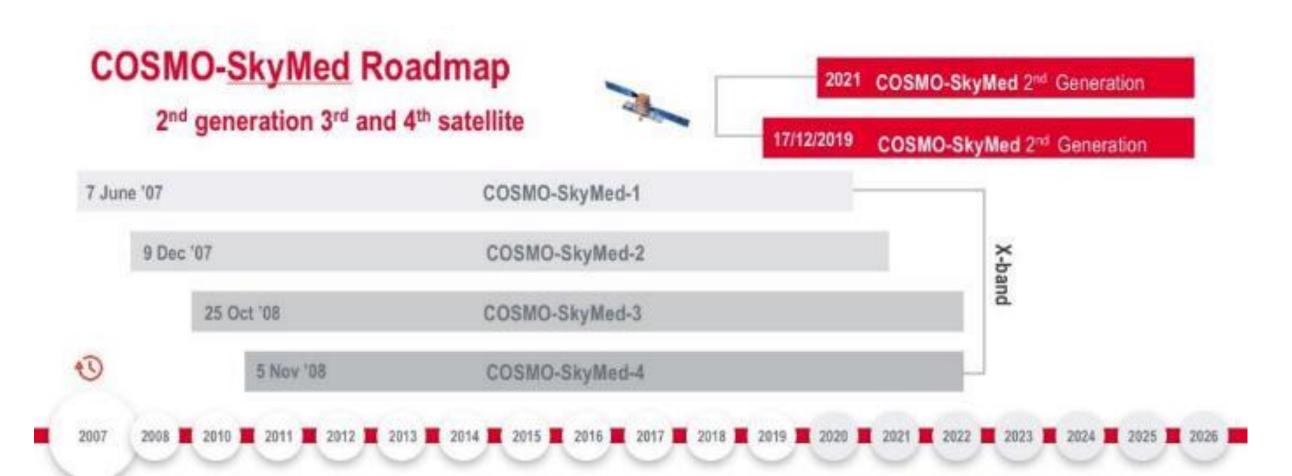






## COSMO-SkyMed

Dual System
Synthetic Aperture Satellites Radar



1500+ Stripmap per day 300+
Spotlight per day

1800 Scenes per day





at global scale



Left/Right Looking



Fastest Revisit Time



All weather Day/Night



- No other civilian SAR system is able to offer 0.5 m ground range resolution over the full incidence angle range
- No other civilian SAR system is able to offer a wider range: 20-60° incidence angle range. This means better revisit and more choices for target characterization.
- The CSG system is the only SAR system available, that allows to acquire 2 images at once, thanks to its unique DI2S mode
- Multi-looking choice, for selecting the best resolution and the lowest noise to match your operational needs



# PRISMA, the Italian Hyperspectral Mission

#### Agenzia Spaziale Italiana-ASI

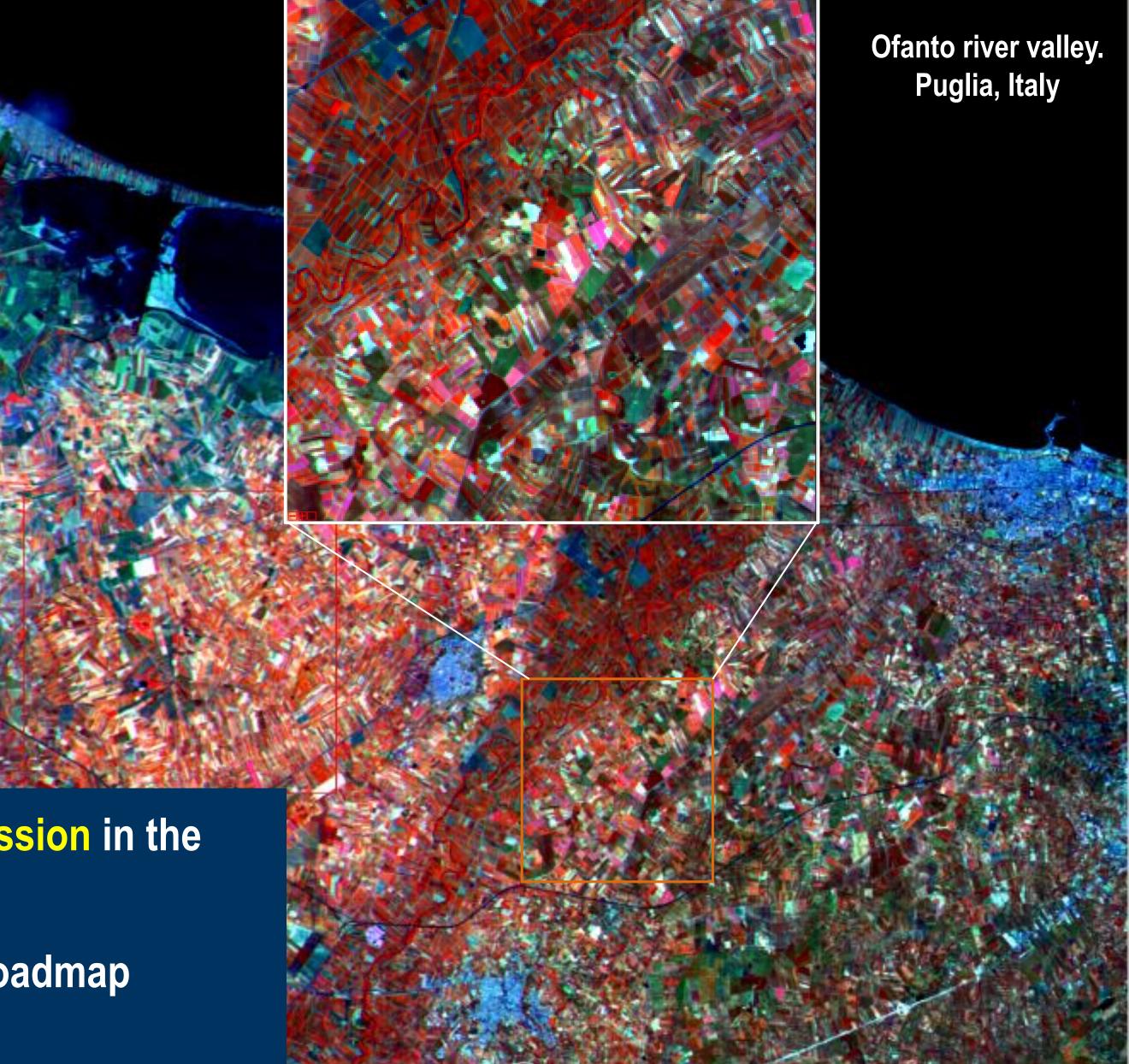
- 244 spectral bands (400-2505 nm spectral window)
- 30 km swath
- 30 m pixel

#### **Targets:**

- «non dynamic» agro land use characterization
- Soil mapping contribution, supporting in- situ measures spatialisation
- PRISMA is today the only operational Hyperspectral Mission in the European EO scenario
- ASI is currently developing a hyperspectral missions roadmap towards a PRISMA second generation











#### All COSMO-SkyMed images © ASI - Agenzia Spaziale Italiana

e-GEOS S.p.A – L.O. Contrada Terlecchie snc – Matera / HQ Via Tiburtina, 965 – Roma

info@e-GEOS.it









O @e\_geos