

EU SPACE DATA SUPPORTING COFFEE INDUSTRY IN THE EUDR CONTEXT

EUSPA conducted a pilot with a group of 12 EO service providers and 5 coffee stakeholders to build insights into how satellite EO can support coffee companies in their activities within European Union Deforestation-free Regulation (EUDR).

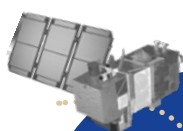
Satellite Earth Observation (EO) enables remote monitoring of forests worldwide. The EO-based solutions assessed in this pilot have different maturity stages. EO companies may offer pure deforestation analysis, or additional services incl. traceability, legality (e.g., protected areas), risk assessment and deforestation alerts.

Data sources

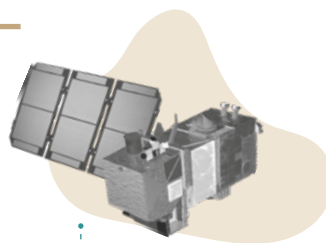
- **Copernicus Sentinel 1 and Sentinel 2** images are a **key contributor** to the development of **EUDR assessment & compliance solutions** in all maturity stages and enable the delivery of lower-cost services.
- **Very high-resolution images** (commercial) enable validation / verification and are often used for the **assessment of small plots**.
- **Global, free and open forest datasets** (e.g., [EU observatory on deforestation](#) and forest degradation and Global Forest Watch) provide relevant information. However, they **may present challenges** incl. overestimation of forests.

Accuracy & quality assurance

- **Algorithms (and accuracy) are specific to geographies / biomes**, as they are tailored for environmental parameters such as cloud cover, topography and vegetation cover / density.
- **The assessment of plots <4ha** when defined by single point with latitude/longitude coordinates **present large variations in outcomes**, due to different methodologies for converting a point into an area & the positioning of the point coordinates in the plot.
- Quality assurance may involve **sampling outputs for manual inspection, photo interpretation of very-high resolution data, ground truthing, as well as customer feedback**.



For more information, refer to the complete report on www.euspa.europa.eu



Satellite sensors

EO solutions leverage **optical & synthetic aperture radar (SAR)** (or a combination of both).

- Optical images help identifying **land use & change, developing forest baseline and mapping commodities**, but are impacted by cloud cover.
- SAR images support the analysis of **forest degradation and changes in forest structure under all weather conditions**, and are particularly suited for deep forest.

Coffee

Coffee EO deforestation analysis can have specific characteristics. Algorithms should consider, for example, coffee under shade and large presence of smallholder producers (small plots).



Stakeholders that contributed to the project

EU space-enabled players



Coffee stakeholders

