

#EUSpace 

EU SPACE WEEK 2023

7 - 9 November - Sevilla, Spain

The role of Earth Observation (EO) in the context of the EUDR

User Consultation Platform: Forestry Session

 GAFAG Fabian Enssle
GRUPPO ASSOCIATO FORESTIERO ITALIANO





GAF AG

experience-based innovation for individual
geo-information solutions
&
very/high- resolution satellite data
mapping services
&
consulting.

35+ years of experience

140+ countries

220+ employee

40+ projects for European Commission

15+ years working with the IFIs

Since 1996 Exclusive Commercial Distributor
with DLR of Indian Space Research Organisation
data in Europe



Challenges for Producer Countries with EUDR Legislation: Africa

During the October Global Landscape Forum hosted by ICRAF-CIFOR in Kenya, there was a specific session “Putting smallholders at the center of deforestation-free value chains in Africa,” and some main outcomes were:

- It was noted that coffee, cocoa and soya make up 19.5% of Africa GDP.
- 75% of deforestation in Africa is related to agriculture expansion, and these 3 commodities are a main contributor.
- 80% of the commodities are sourced from smallholder farmers
- Majority of smallholders across the continent (and world) are unaware of the EUDR and what it entails.
- Smallholders make up 60% of farmers on the continent and do not have the ability to trace deforestation.
- Producer country Governments and smallholder farmers will need capacity building in data collection and management for the EUDR to work
- There is a need to have detailed maps of areas that have already been deforested before 2021.

Stakeholder Needs

- In response to these challenges it is important that not only the ‘operators’ obtain the geolocation data for the commodities, but also Governments of Producer countries and the farmers themselves need this information.
- Thus scalable forest area products are available for these different stakeholders to support the implementation of EUDR
 - Tree Cover and Tree Cover Density information
 - Near-Real Time forest disturbance assessment
 - Long term storage of data and cross references to the base line map (Forest Cover 2020)

Forest monitoring in the frame of EUDR – Baseline 2020

- Land spanning more than 0.5 hectares (ha) with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.

Earth Observation data by Copernicus Sentinel-1 & 2



Tree cover presence information

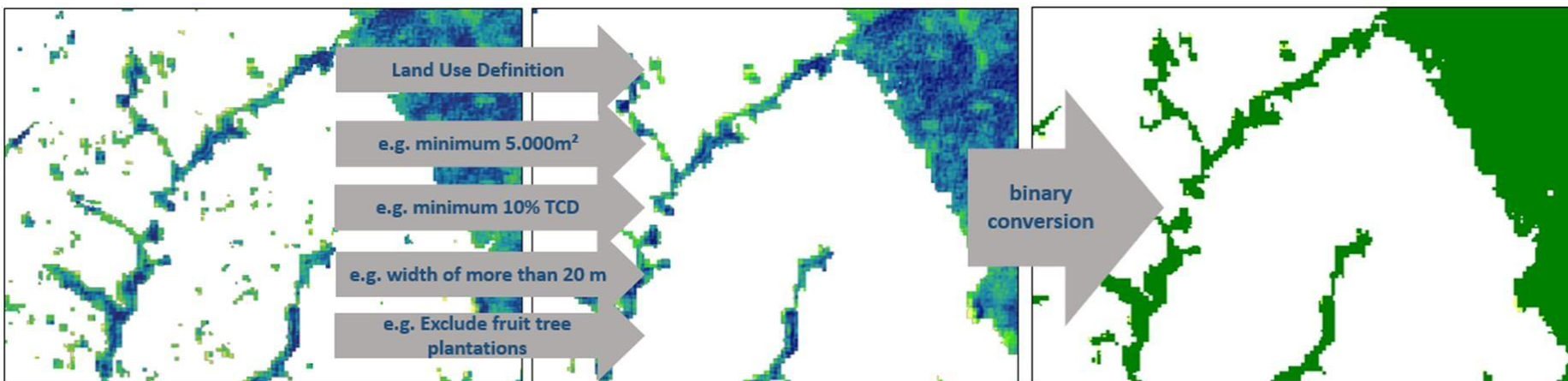


Areal extent of 0.5 ha

Tree cover density (TCD) for 2020



Min 10% canopy cover



Tree Cover Density (TCD)

- The Tree Cover Density (TCD) is the vertical projection of tree crowns to a horizontal earth's surface. It provides information on the proportional crown coverage per pixel in a range of 0 to 100 %. The TCD product is generated by using High Resolution Satellite data from Copernicus missions (Sentinel-1 and Sentinel-2).
- Demonstrated for tropical dry and humid forest ecosystems within Earth Observation for Sustainable Development (EO4SD-FM) project, funded by ESA.

EUROPEAN SPACE AGENCY ABOUT EO4SD OVERVIEW PORTFOLIO CAPACITY BUILDING CONSORTIUM BLOG PUBLICATIONS

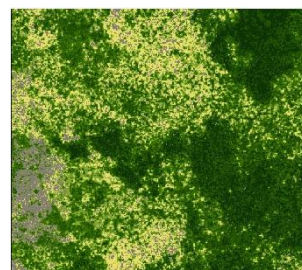
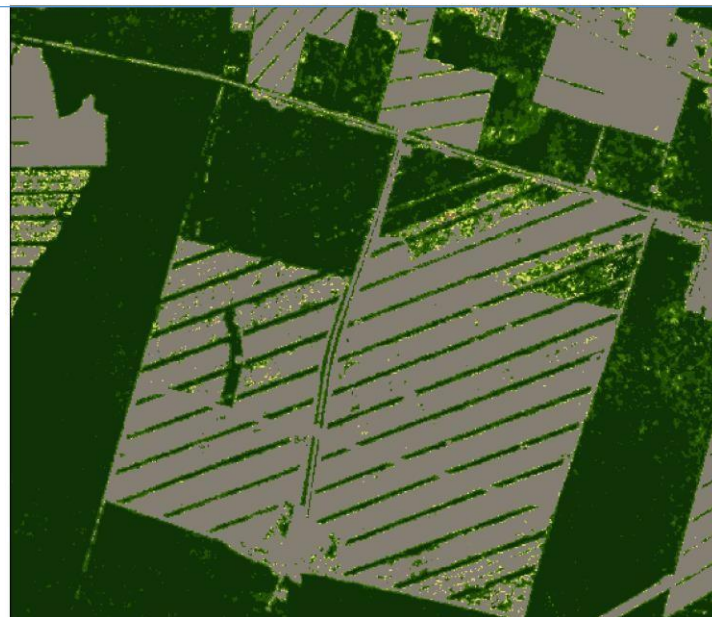
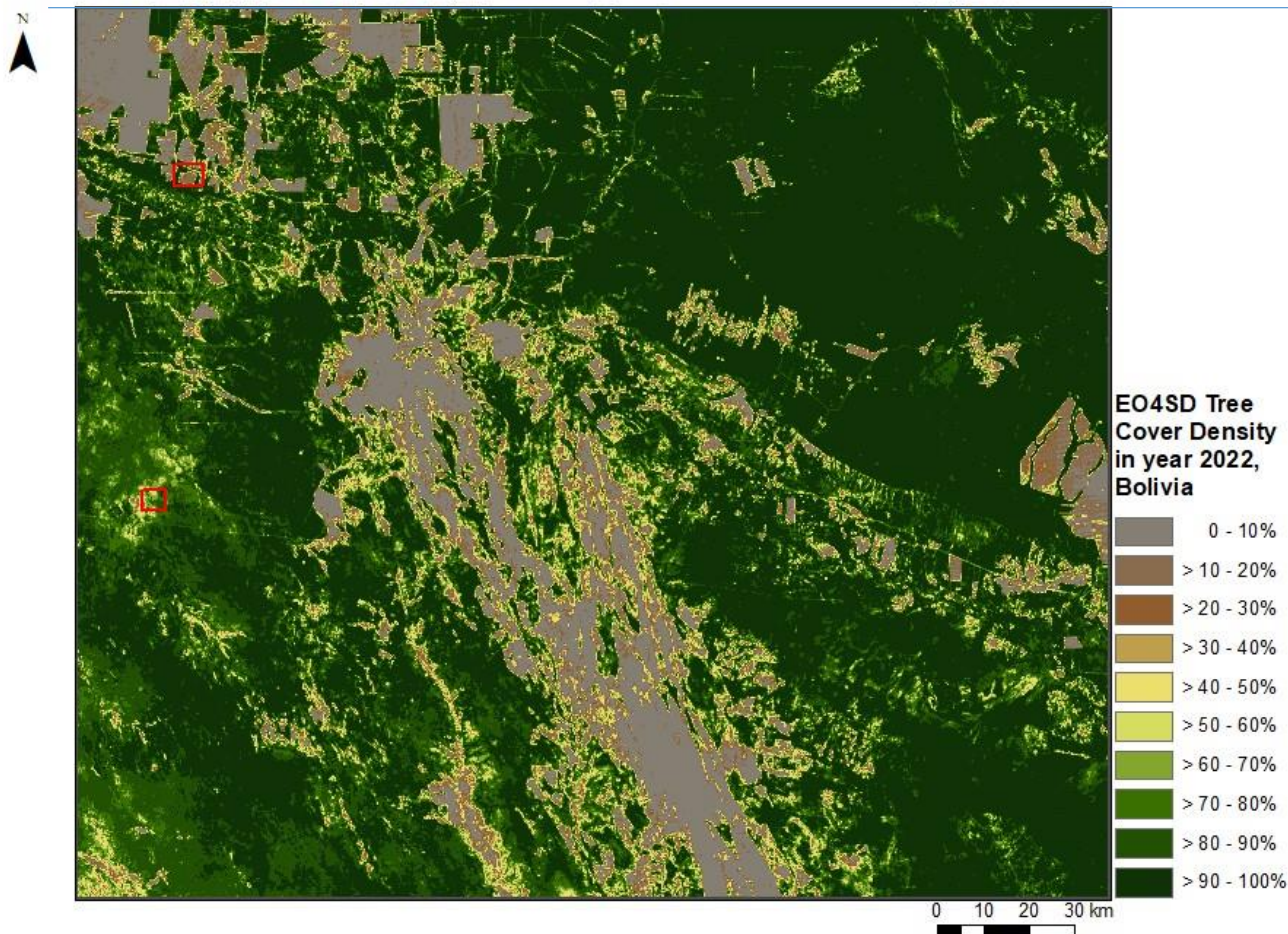


forest management
earth observation for sustainable development
esa

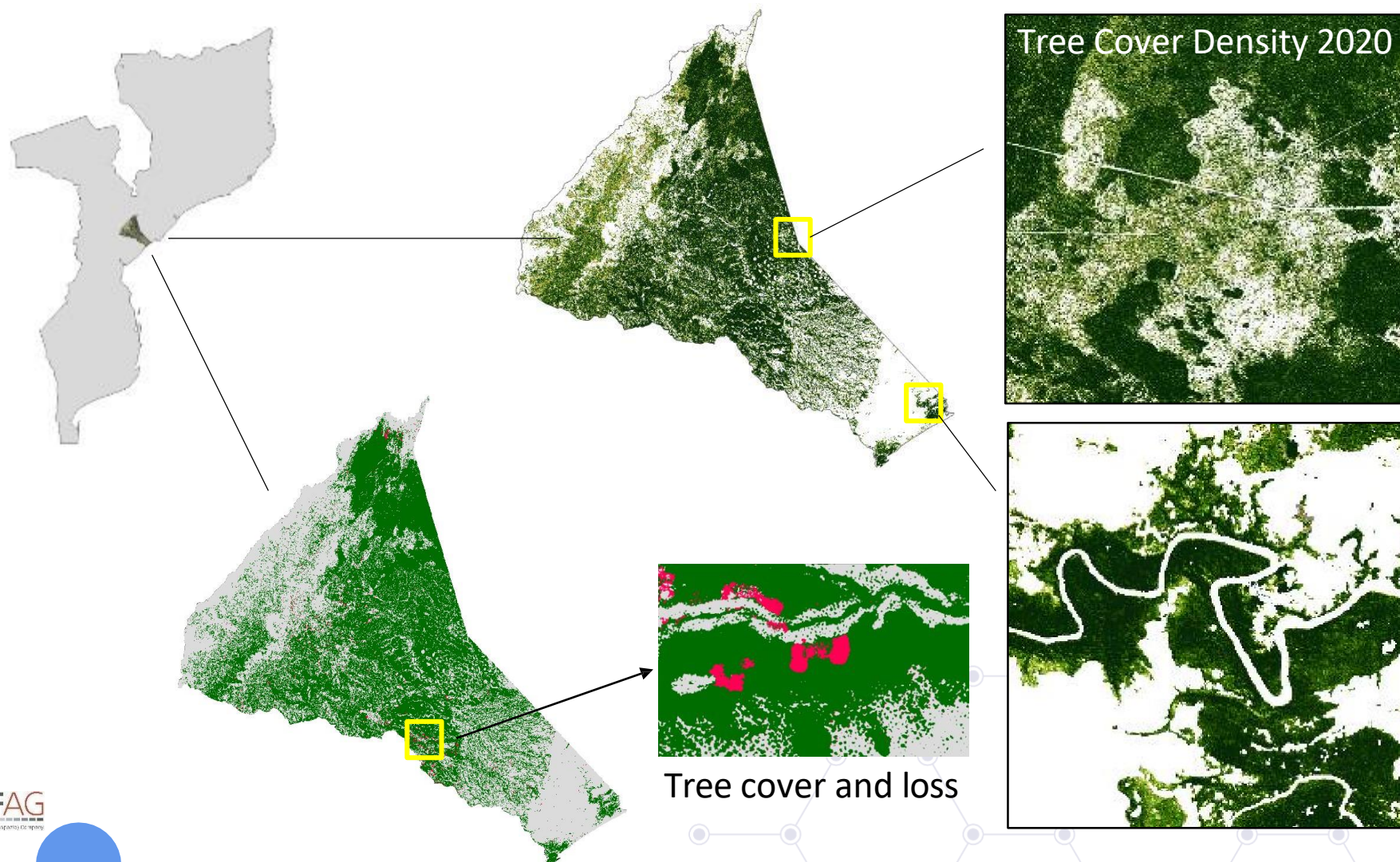
Learn more about EO4SD-FOREST MANAGEMENT
an ESA project aimed at deriving key geo-information products from Earth Observation data in support of forest development programmes



Tree Cover Density, Bolivia

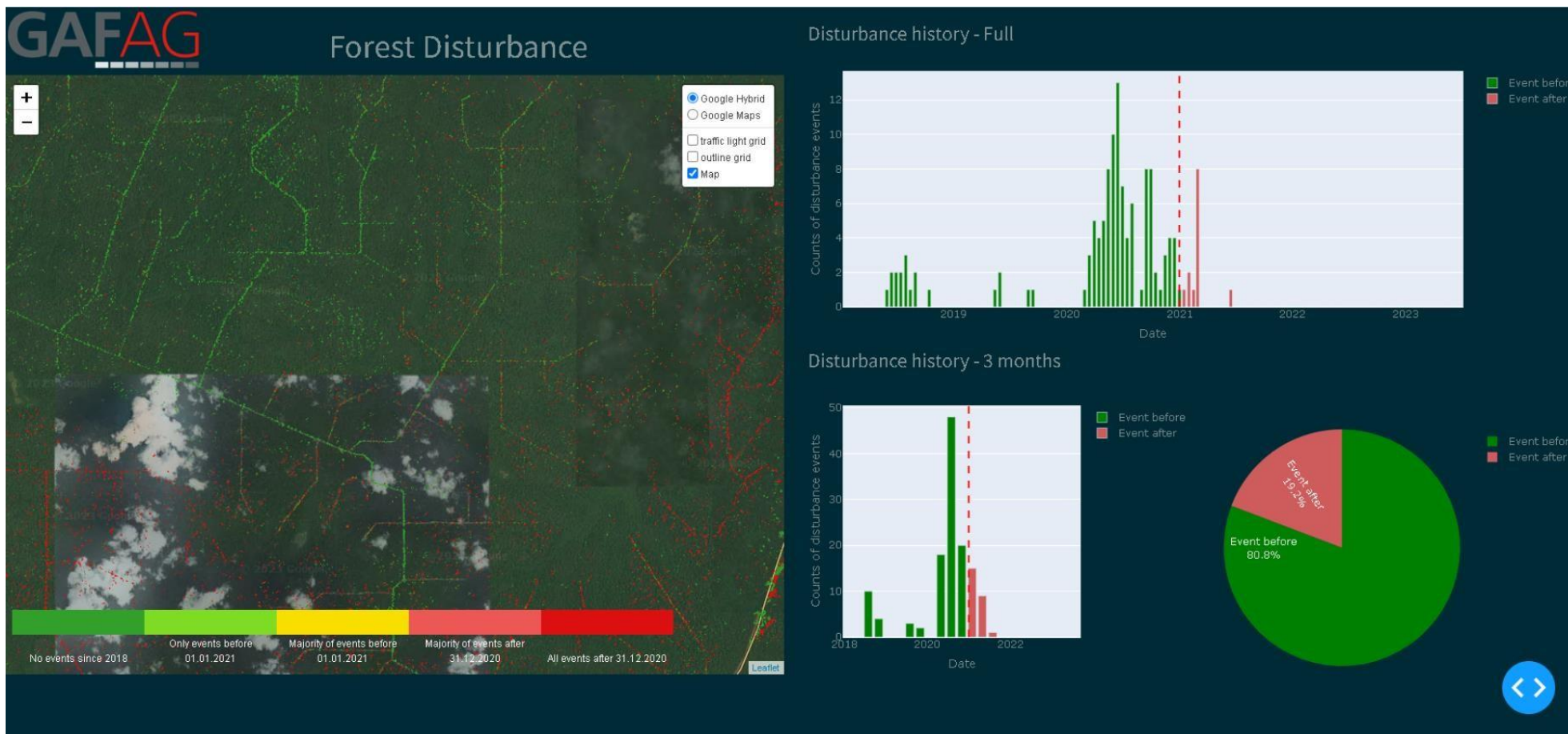


Tree Cover Density, Mozambique



- Proportion of Tree Cover at pixel level
- Continuous scale (10-100%)
- For humid and dry tropical forests

Tracking deforestation and forest degradation – Sentinel-1



Tracking deforestation and forest degradation – Sentinel-1



Validation Service

- Supporting the transmission of correct and valid geoinformation on plot of land
- Plausibility checks of provided geoinformation
 - Plot of land inside/outside of agricultural Land Use at cut off day
 - Tree Cover loss intensity in/around reported plot of land
 - Reported commodity same as EO observed commodity (avoid assignment to other production sites)
 - Geolocation within protected areas
 - Accessibility implausible (required infrastructure not observed)


EU
SPACE
WEEK
2023

Thank you for your attention

contact:

fabian.enssle@gaf.de

#EUSpace 



EU
SPACE
WEEK

2023

www.euspaceweek.eu | #EUSW

