

Innovative technical solutions and pilot project to support compliance with the EUDR



01 Introduction of GRAS

GRAS is a comprehensive solution to implement and monitor sustainable and deforestation-free supply chains and to meet due diligence requirements



Identifying deforestation and degradation of high biodiverse areas

Implementing secure and efficient **monitoring** of global supply chains



Mapping and managing sustainability risks in agricultural production

Supporting credible and cost-efficient **certification** processes



GRAS is an integrated one-stop-shop solution to map sustainability information and analyse compliance with relevant sustainability criteria



Biodiversity Areas



Deforestation



High Carbon Stock



Social Indices



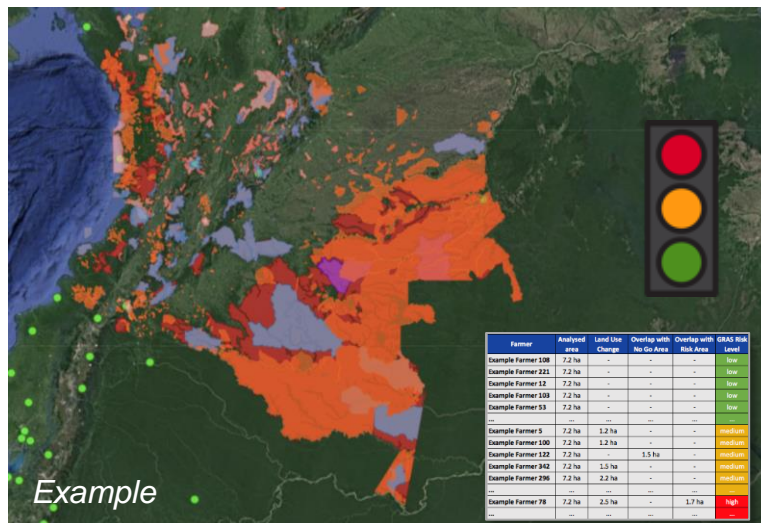
GRAS has been supported by:



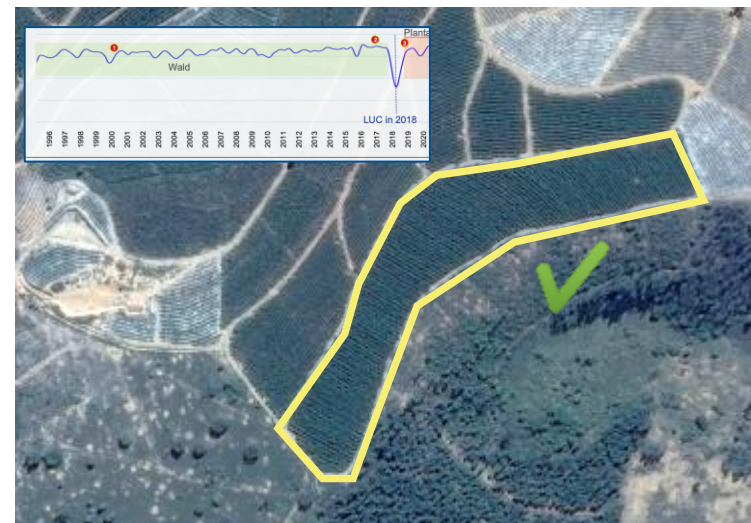
aufgrund eines Beschlusses
des Deutschen Bundestages

GRAS supports the analysis and monitoring of supply chains on different levels, integrating the approaches into innovative analysis and reporting tools

The risk assessment approach enables efficient identification of high-risk areas in the supply chain. Detailed analyses at field and plantation level verify compliance with deforestation criteria



Risk assessment of sourcing regions, administrative or plantation level



Detailed analysis of land use change



Interactive monitoring and reporting tools



GRAS supports companies to comply with obligations from Due Diligence regulations

Examples



German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (LkSG) & EU Directive on Corporate Sustainability Due Diligence (CSDDD)

- Abstract risk assessment of relevant human rights risks
- Establishing and managing grievance mechanisms



Regulation on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation (EUDR)

- Collection of geo coordinates, polygons and legality information
- Analysis of deforestation after 31 Dec 2020
- Risk analysis for individual deliveries
- Reporting for DD Statements and internal documentation

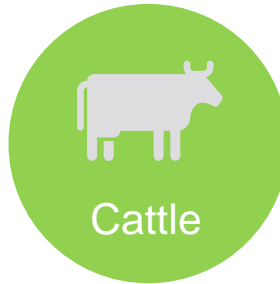


02 Innovative solutions to support compliance with EUDR

Obligations described in the EU regulation on deforestation-free supply chains

Proof that products are **deforestation-free** and **legal**

- Cut-off date for deforestation: December 31, 2020
- In accordance with all relevant legislation in force in the producing country



Collection of **farmer information and field coordinates/ outlines**

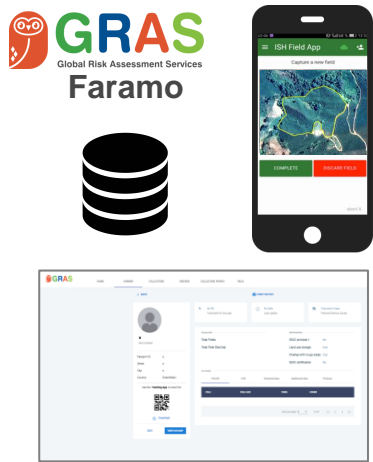
Provide information that production is **deforestation-free and legal**

Conduct **risk assessment** and mitigation measures

Passing on the information **through the supply chain**

GRAS and 4C provide tools to collect and analyse relevant data for specific plantation areas, e.g. collecting geo-coordinates, analysis of deforestation

Collecting information



The image shows the GRAS Faramo logo, a database icon, a smartphone displaying the 'ISH Field App' interface, and a screenshot of the web management system.

- Mobile app for efficient data collection on the ground
- Collect basic farmer data
- Geo-coordinates & plantation outlines
- Photos of legal documents
- Questionnaire on legal requirements
- Farmer management system
- Train the trainer approach

FARAMO - Management, analysis and visualization of plantation outlines and production data



The image shows the 4C logo, a location pin icon, a photograph of a coffee plantation, and an aerial map of the plantation with various colored markers (green circles, blue triangle, purple pentagon) indicating specific locations.

4C certification includes the collection of geo-coordinates of farmers

Identifying deforestation

Examples

Sentinel 2 (ESA, Copernicus):

- 10x10m spatial resolution
- Launch Sentinel-2A: 2015
- Images available every 5 days

Landsat (NASA):

- 30x30m spatial resolution
- Launch Landsat 4/5: 1982/84
- Landsat 8/9 available every 8 days

GRAS uses remote sensing technology to detect land use change and deforestation



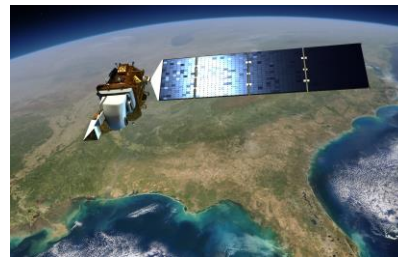
Sentinel-2



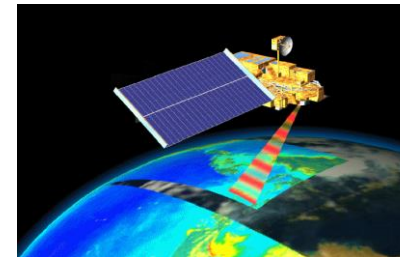
SPOT



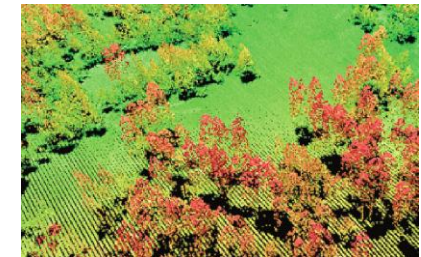
PALSAR



Landsat

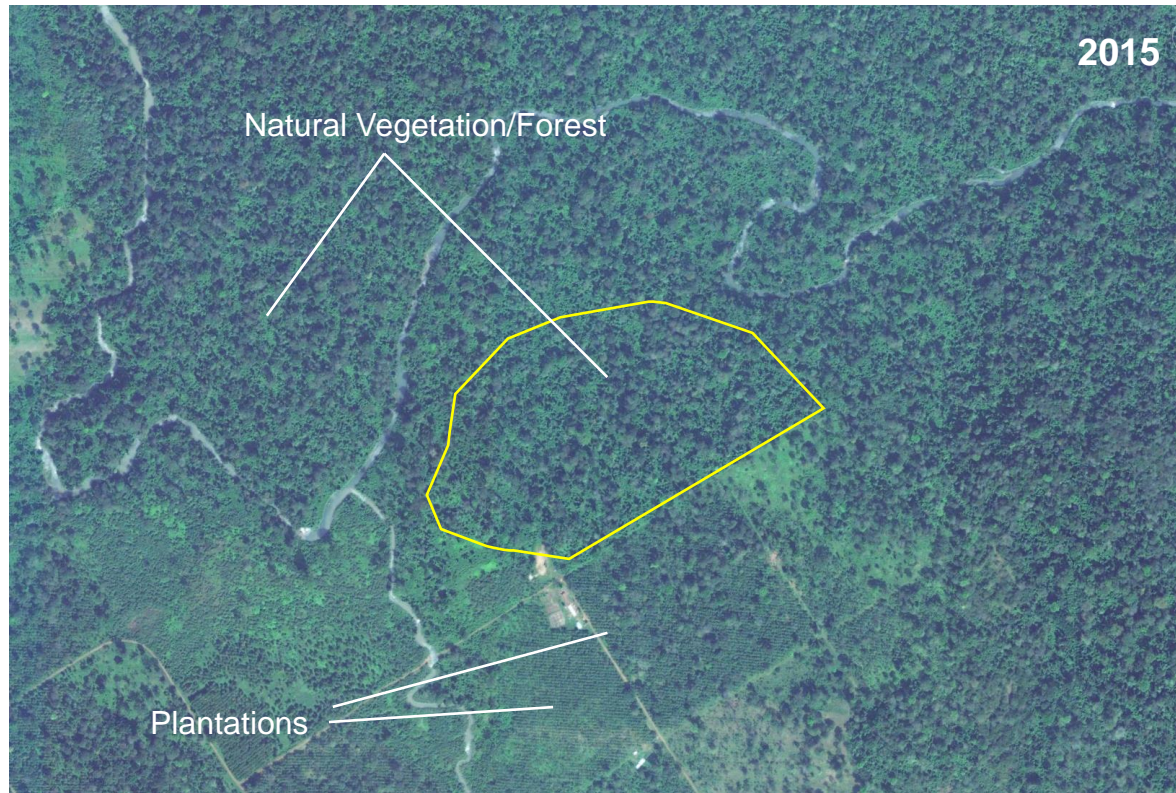


MODIS



LiDAR

GRAS uses high resolution satellite images and additional datasets on forest density and height to identify and verify the conversion of forest to plantations



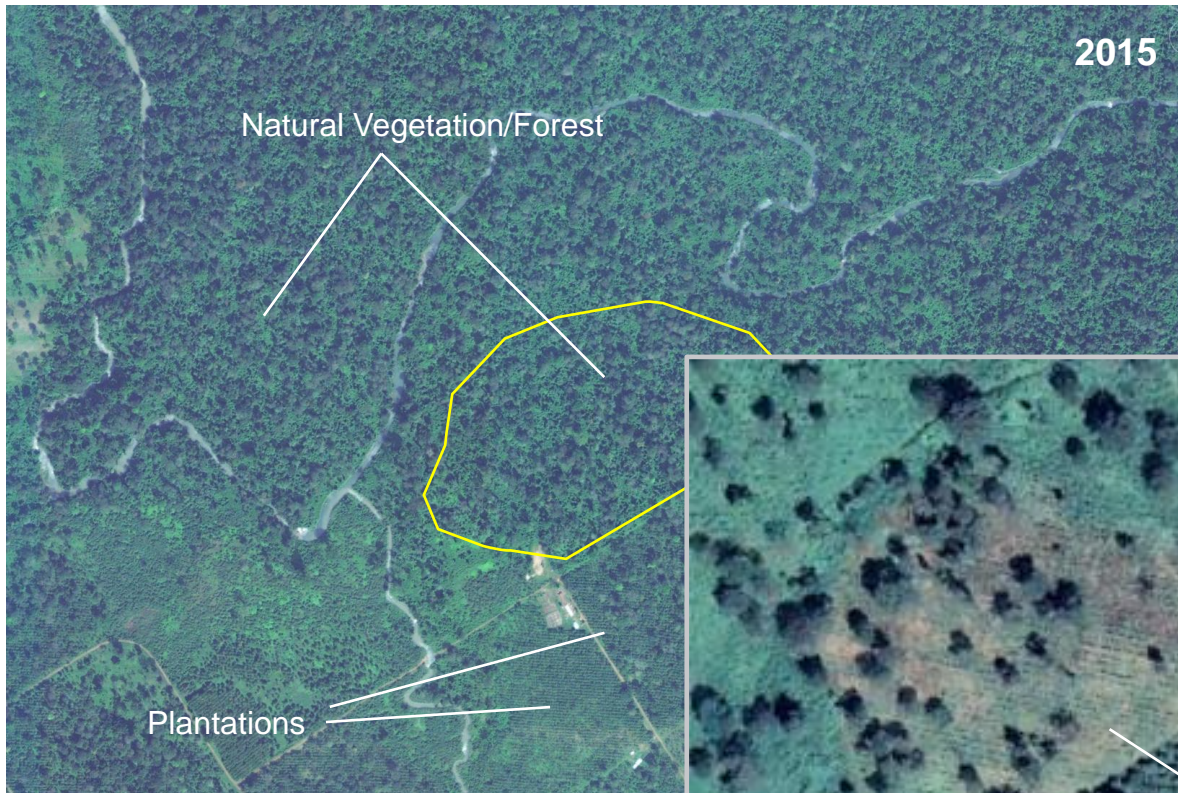
Source: Maxar Technologies



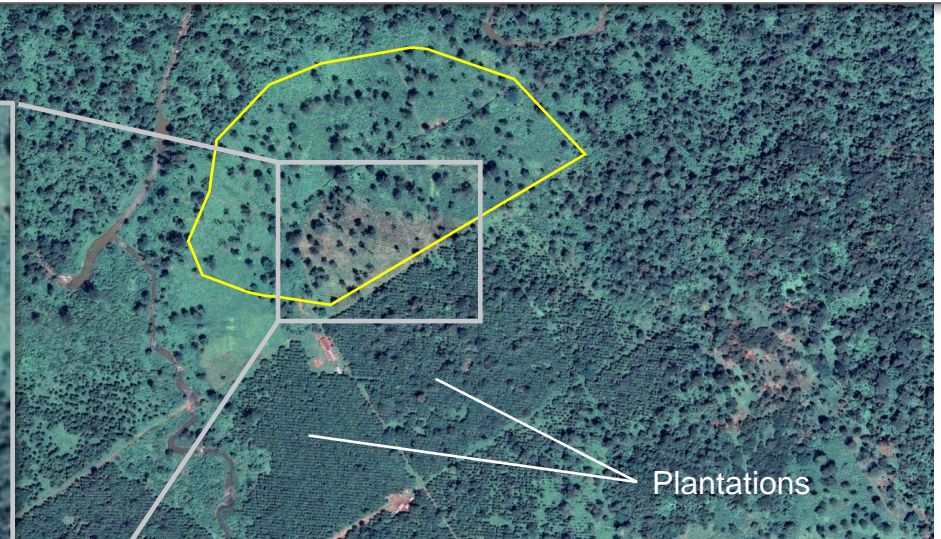
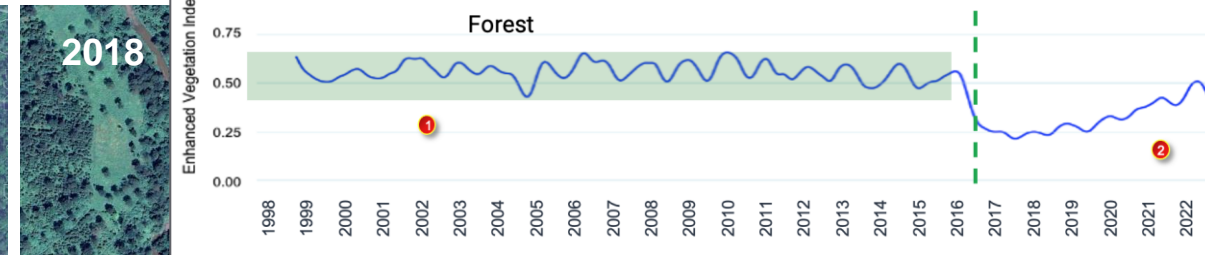
Source: CNES / Airbus

Example

EVI time series support the identification of the point of time of land use change activities and the verification of compliance with deforestation criteria



Source: Maxar Technologies

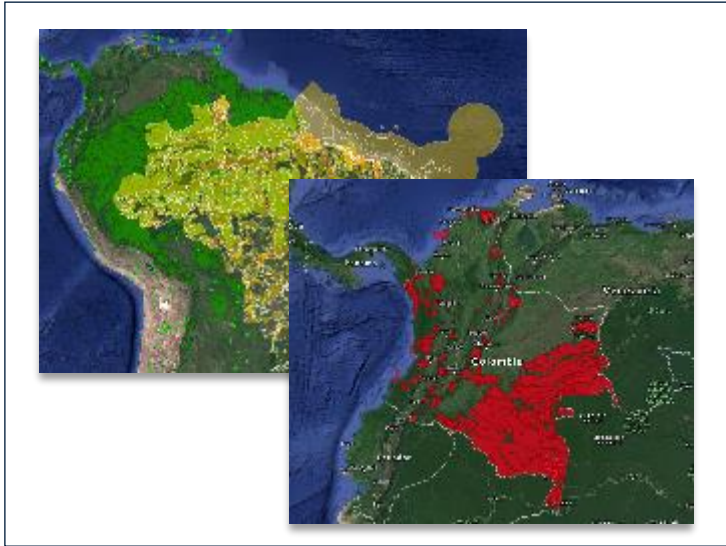


Source: CNES / Airbus

Example

The risk assessment approaches from GRAS are customized to the specific criteria relevant for DD regulations, based on geo-data & statistics and indices

Risk assessment

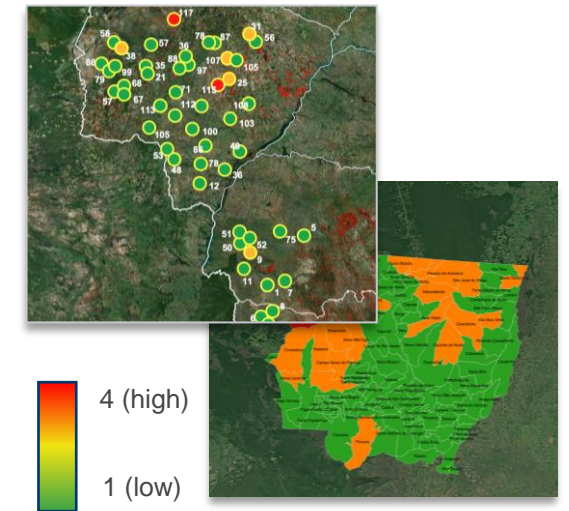


Forest, deforestation, protected area datasets and others are used for sub-regional risk assessment

&

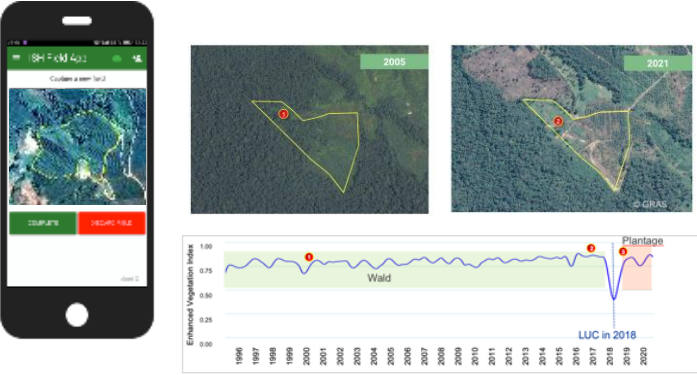


Evaluation of political and social criteria, information from certification systems and third parties




Transparent, data-based risk evaluation


GRAS can conduct regulation-specific risk assessments and provide a tool to pass on information through the supply chain




• Mapping of plantation areas
• Analysis using satellite data and innovative evaluation methods



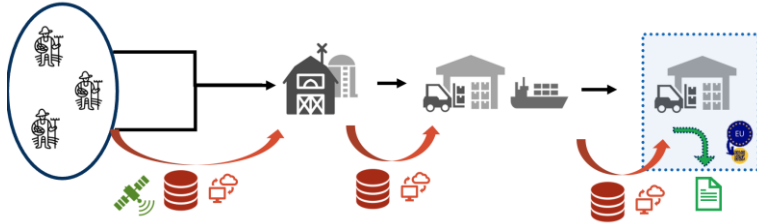
Collection of farmer data and geo-coordinates & analysis of deforestation




- Consideration of all relevant environmental and human rights criteria of the EU regulation



Risk assessment

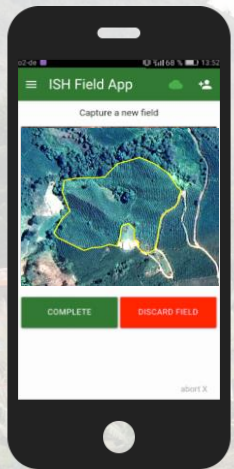


- Independent traceability platform
- Passing on of farmer information through the supply chain by „digital handshake“



Traceability

Farmer App



App



Database

Running Pilot Project: Empowering smallholder coffee farmers in Colombia to claim deforestation-free coffee by introducing easy to use digital tools (DKV Business Scout Fund project)

- DKV – Deutscher Kaffeeverband, FNC, GRAS, 4C
- Project time frame 1.5.-30.12.23
- Data collection for 1000 farmers in Colombia
- Training of farmers on EUDR requirements
- Train-the-trainer through GRAS to use the Faramo tool for data collection, analysis and management
- Gain knowledge and first-hand findings on local challenges on the ground



Thank you very much!