Frontierra

CSFL
CENTRE FOR SUSTAINABLE FORESTS AND LANDSCAPES

# The Role of Geospatial Data in Zero-Deforestation Monitoring

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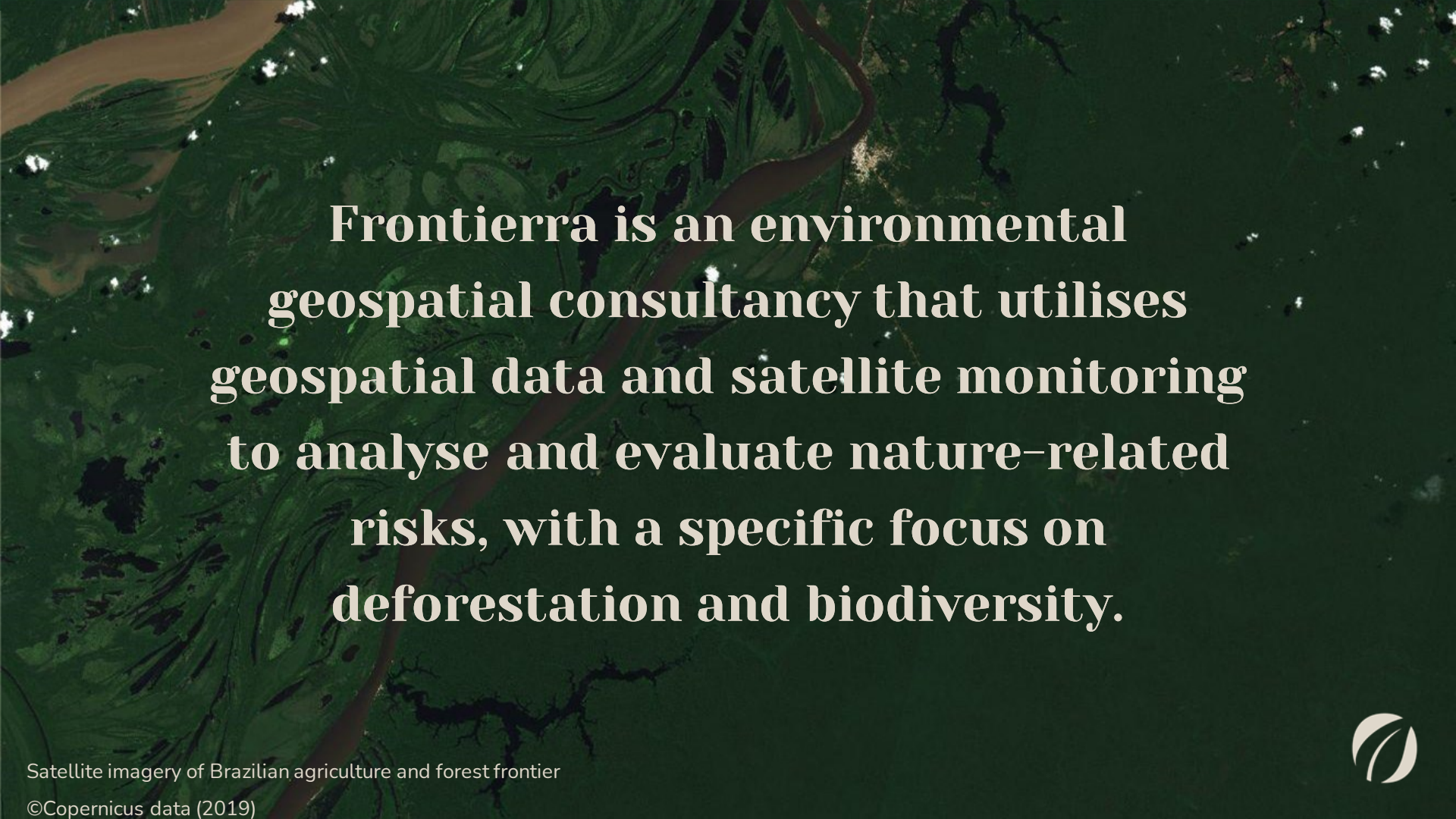


Frontierra is an environmental geospatial consultancy that utilises geospatial data and satellite monitoring to analyse and evaluate nature-related risks, with a specific focus on deforestation and biodiversity.

Satellite imagery of Brazilian agriculture and forest frontier

©Copernicus data (2019)

# The Deforestation Problem

Approximately 420 million hectares of forest were lost between 1990 and 2020, contributing significantly to ecosystem degradation and climate change.

# EU Deforestation Regulation Overview

European Commission

Beef

Palm Oil

Rubber

Wood

Cocoa

Coffee

Soy

# Example: Cocoa Supply Chain

Commodity + Farm Locations + Geospatial Data

**1200**
**Total Plots Assessed**

| 25 | 500 | 675 |
|---|---|---|
| **Non-Compliant** | **Compliant** | **Negligible** |
| Deforestation/Degradation | Forest | No Forest |

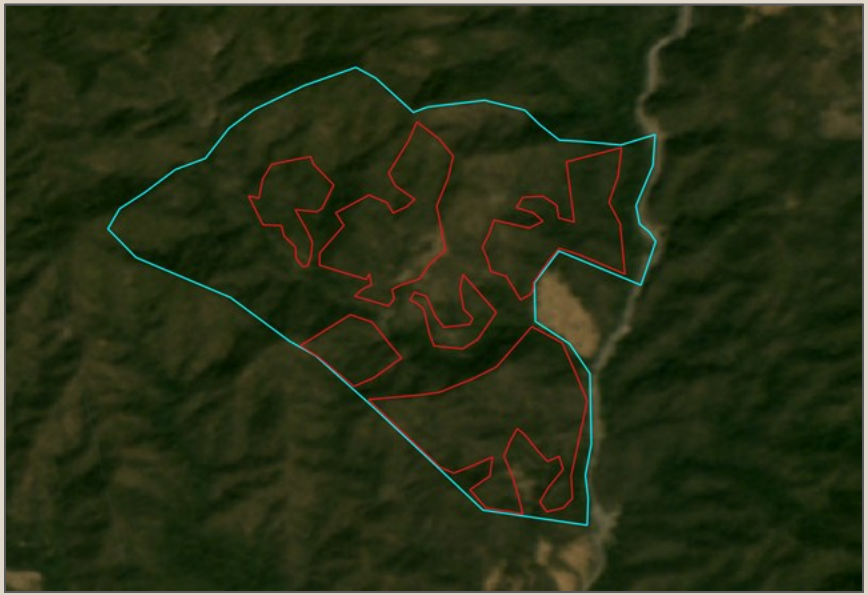
Trade

Track

Report

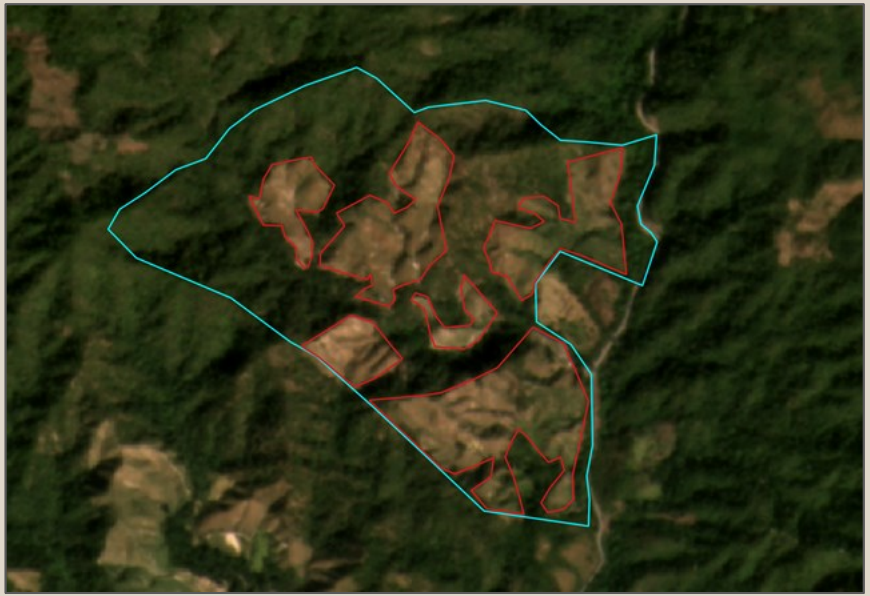
# Non-Compliant example

Forest detected at baseline, deforestation and or degradation of over 0.5ha detected after the baseline.



Modified Copernicus Sentinel data (2020)

*December 2020*



Modified Copernicus Sentinel data (2024)

*March 2024*

# Compliant example

Forest detected at baseline, **no** deforestation or degradation detected after the baseline.

*Modified Copernicus Sentinel data (2020)*

*December 2020*

*Modified Copernicus Sentinel data (2024)*

*March 2024*

# Negligible example

No forest detected at baseline, (monoculture plantation or non-forest land type)

*Modified Copernicus Sentinel data (2021)*

*January 2021*

*Modified Copernicus Sentinel data (2024)*

*April 2024*

# Benefits of our Approach

**Integrated**
Location-based integrated assessments of nature & climate

**Satellite Monitoring**
Geospatial data for accurately monitoring operations and supply chains

**Cost Effective**
Global coverage; cloud based solutions; operational efficiency; less onsite visits

**Asset Location & Mapping**
Understand variation in geography, for specific risk management

**Scalable**
Individual assets or companies to global portfolios

**Report & Disclose**
Align to standards; communicate with stakeholders; measure and disclose progress

# Frontierra

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