



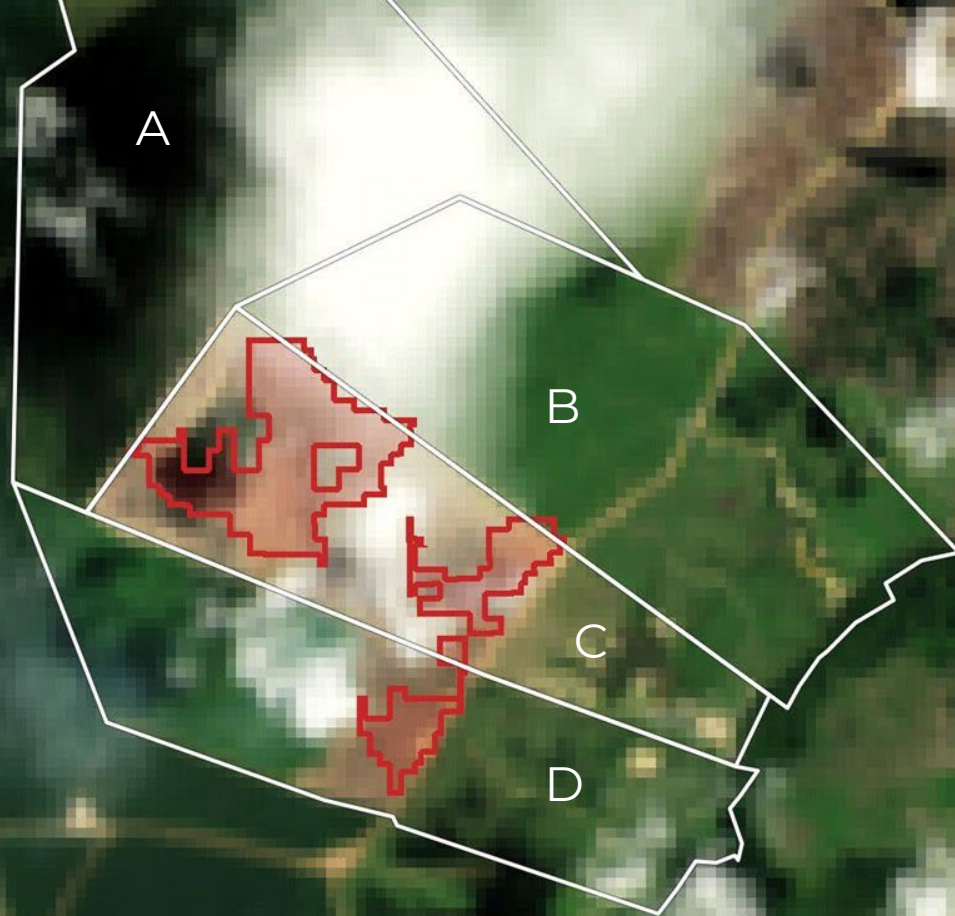
NICFI  
SATELLITE DATA  
PROGRAM

# How Access to High Resolution Satellite Data is Supporting Tropical Forest Monitoring: The Impact of the NICFI Satellite Data Program

Charlotte Bishop, KSAT

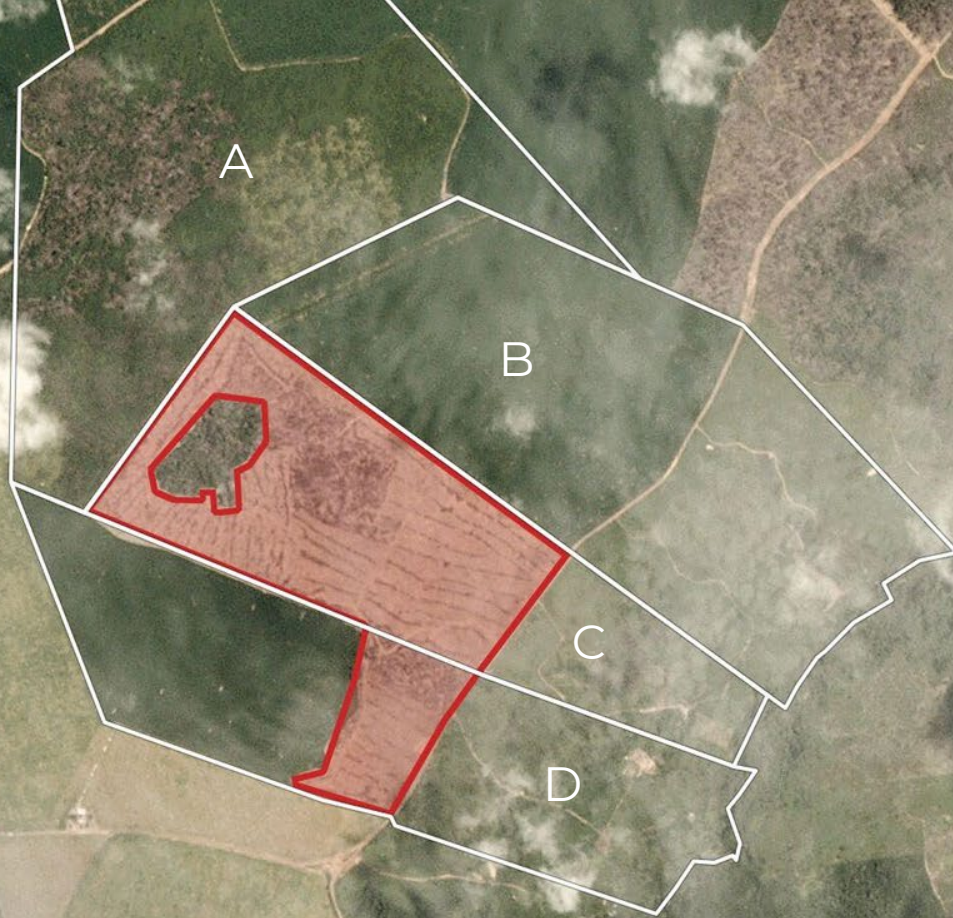


SPATIAL RESOLUTION



**Brazil**  
**Landsat data** – March 2018

**SPATIAL RESOLUTION**



**Brazil**  
**PlanetScope data** – March 2018



**Brazil**  
**SPOT6 – 2013**





SPOT7 © Airbus DS 2018 - Imagen - Amazon Forest, Perú



La Dorada - Colombia  
SPOT7 © Airbus DS 2017

**Colombia**  
**SPOT7** – 2013





SPOT5 ©Airbus DS 2005



**AIRBUS**



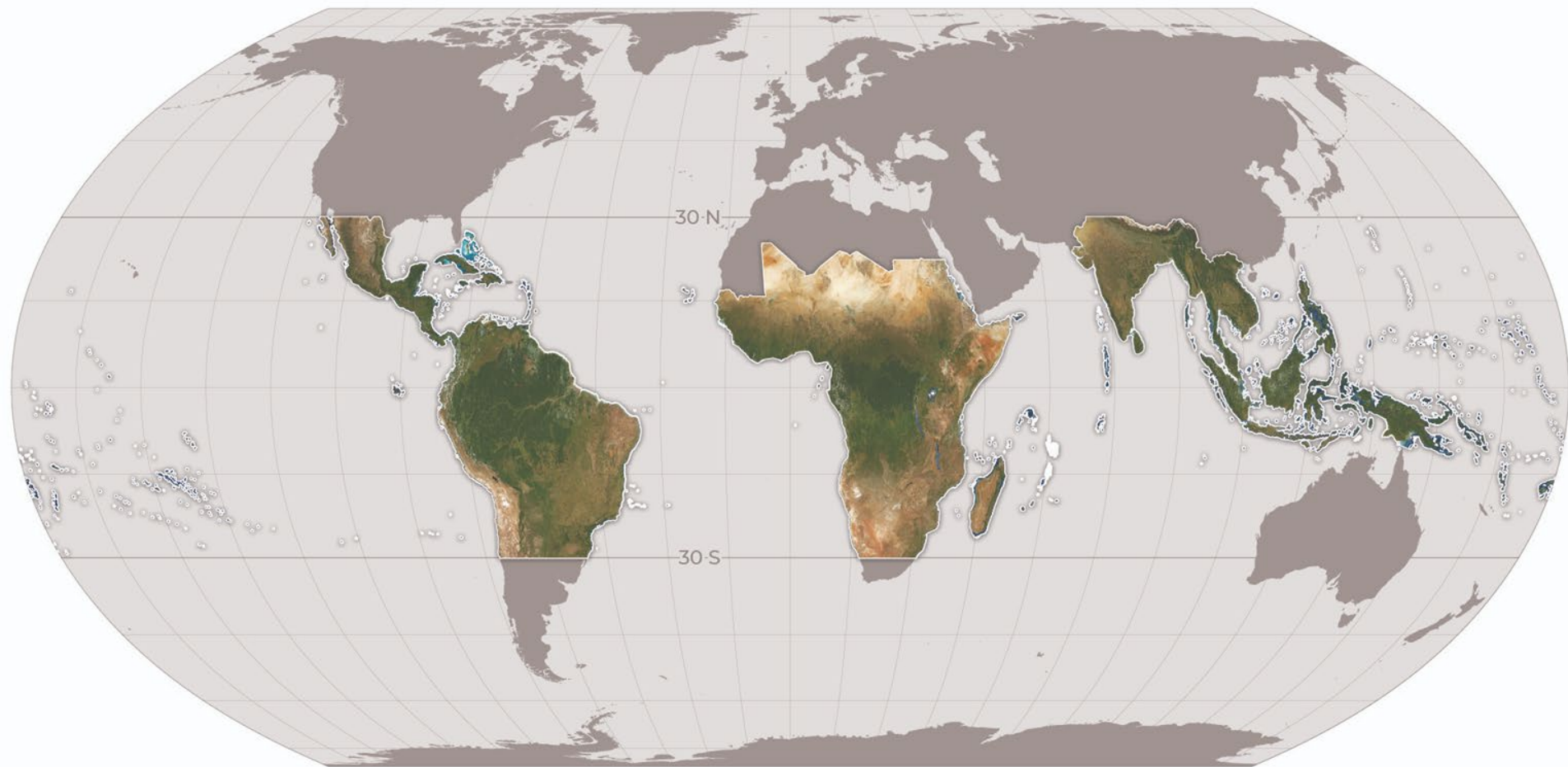
## NICFI Program Purpose



## NICFI SATELLITE DATA PROGRAM

*Reducing & reversing the loss of tropical forests,  
contributing to combating climate change,  
conserving biodiversity, and  
facilitating sustainable development.*









# NICFI SATELLITE DATA PROGRAM

> 400

USER STORIES COLLECTED

30 million

TILES STREAMED FROM PLANET  
EXPLORER SINCE Q1 2021

145 countries

REGISTERED TO USE THE  
PROGRAM

> 15

JOURNAL ARTICLES IN  
PEER REVIEW PROCESS  
SINCE 2021

70%

OF USERS SURVERVED USE THE  
PROGRAM AS THEIR PRIMARY  
IMAGE SOURS

97 countries

COVERED BY THE  
PROGRAM

> 50%

OF TOTAL BASEMAP SELECTIONS  
ON GFW ARE THE NICFI  
BASEMAPS

12000

USERS REGISTERED SINCE  
OCTOBER 2020



NICFI

Norway's  
International Climate  
and Forest Initiative

KSAT  
KONGSBERG SATELLITE SERVICES



AIRBUS

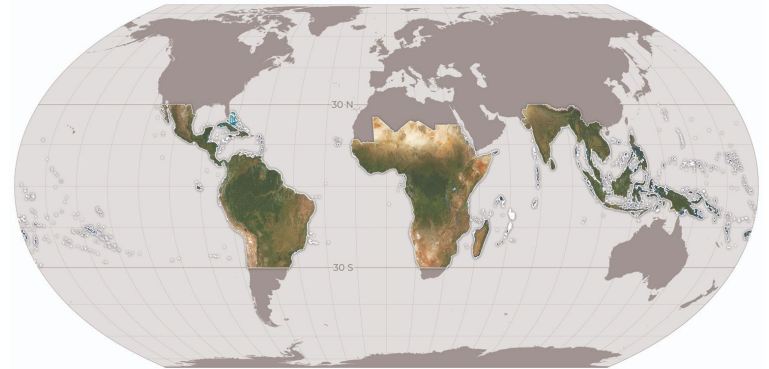


# DATA PRODUCTS

- 45M sq km covered in each mosaic
- Covering forest countries between 30N and S
- Two types of mosaics provided
  - Visually optimised <5m
  - Analysis ready for scientific analysis <5m
- Monthly mosaics: September 2020 until the end of the program
- Bi-annual mosaics: December 2015 – August 2020
- 
- Historical Archive from 2002 (*for selected partners only*)



**NICFI  
SATELLITE DATA  
PROGRAM**



Norway's International Climate and Forest Initiative

**NICFI**

**AIRBUS**

**KSAT**  
KONGSBERG SATELLITE SERVICES





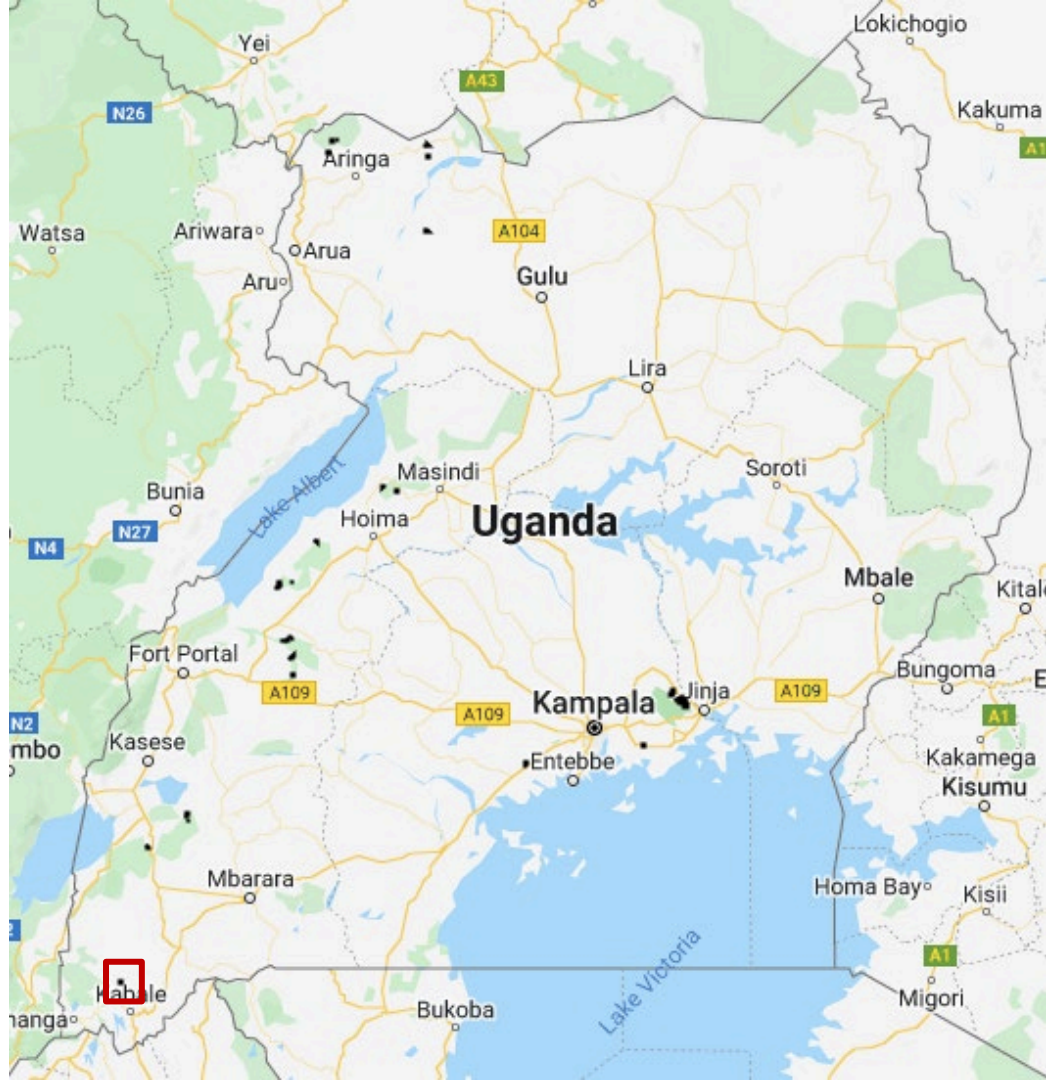
Food and Agriculture Organization  
of the United Nations

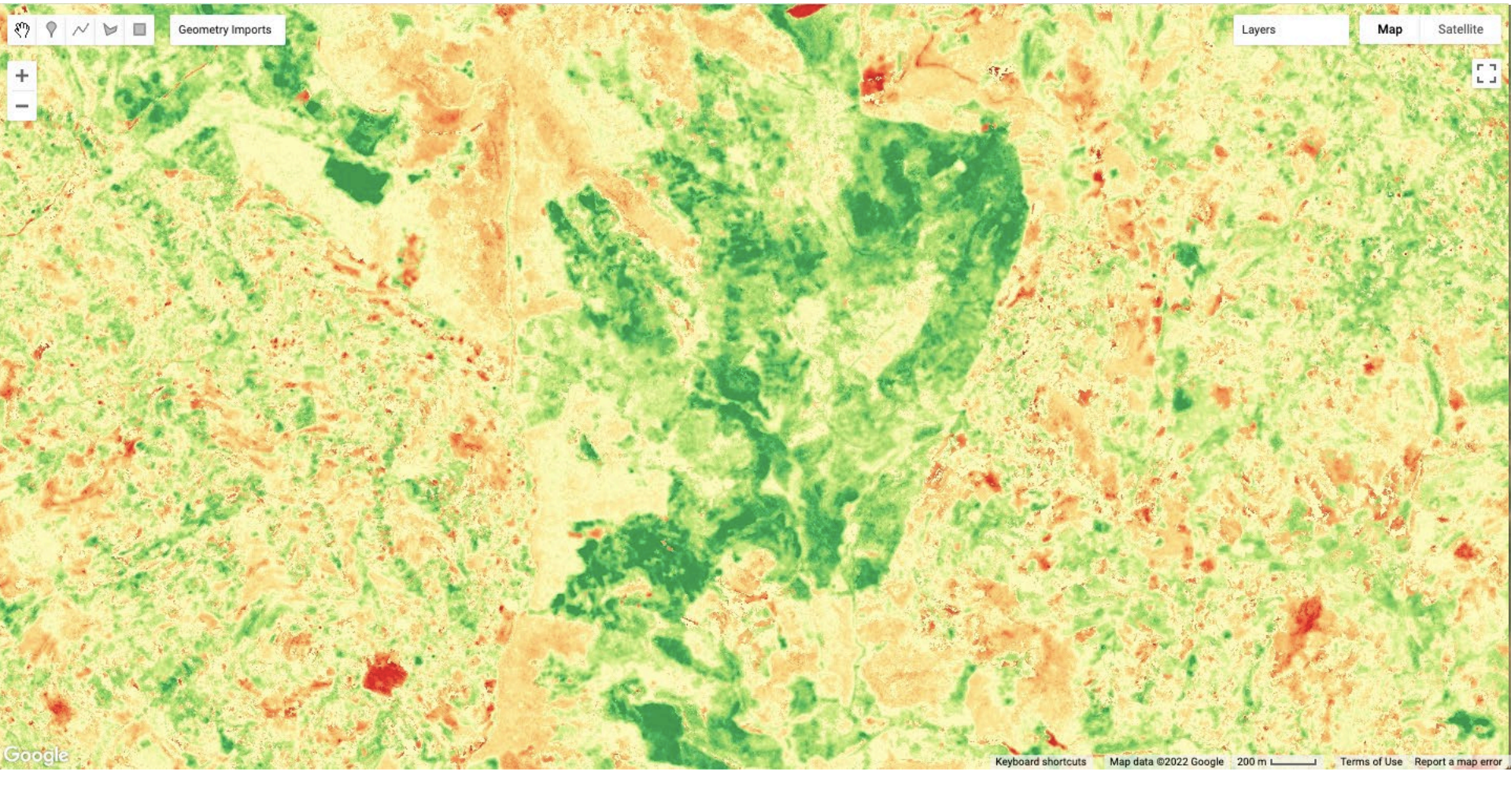
unprecedented  
opportunity to improve  
the resolution, in both  
space and time



## Forest Restoration

- Monitoring forest restoration in Uganda
- Using Planet mosaics and LandTrendr algorithm in SEPAL





Geometry Imports

Layers

Map

Satellite

+  
-

+

Google

Keyboard shortcuts | Map data ©2022 Google | 200 m | Terms of Use | Report a map error



# Supply Chain Monitoring

# aidenvironment

aidenvironment

The world's palm oil refiners should adopt cross-commodity no-deforestation policies.



## DRAFT-REPORT

(Confidential; do not spread)

May 2021

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aidenvironment

NEWS

### THE SUMATERA DINAMIKA UTAMA GROUP, THIRD LARGEST DEFORESTER IN INDONESIA'S PULP AND PAPER SECTOR OVER 2020

The company group Sumatera Dinamika Utama (SDU) was the third largest deforester in Indonesia's pulp and paper sector in 2020, mainly due to its plantation company PT Permata Borneo Abadi, which cleared 650 hectares of forests. Little public information is available on SDU. However, it is the most important supplier to Indonesia's second largest pulp and paper producer Royal Golden Eagle (RGE). The 2020 deforestation was a breach of RGE's no-deforestation commitment.

SEQUENCE OF DEFORESTATION BY PERMATA BORNEO ABADI

December 2019

March 2021

Sources: Satellite imagery planet.com, forest cover maps 2016 Indonesian ministry for Environment and forestry.  
Coordinates clearing area: 0°31'38.28"N, 116°15'1.74"E.



## Law Enforcement

“Planet imagery is important for law enforcement activities so we can keep monitoring deforestation every month and find a way from the roads to the location of deforestation.”

*-Muhammad Fadhil Ayyasy, GIS staff at HAKA*





# Open Tools to view the data

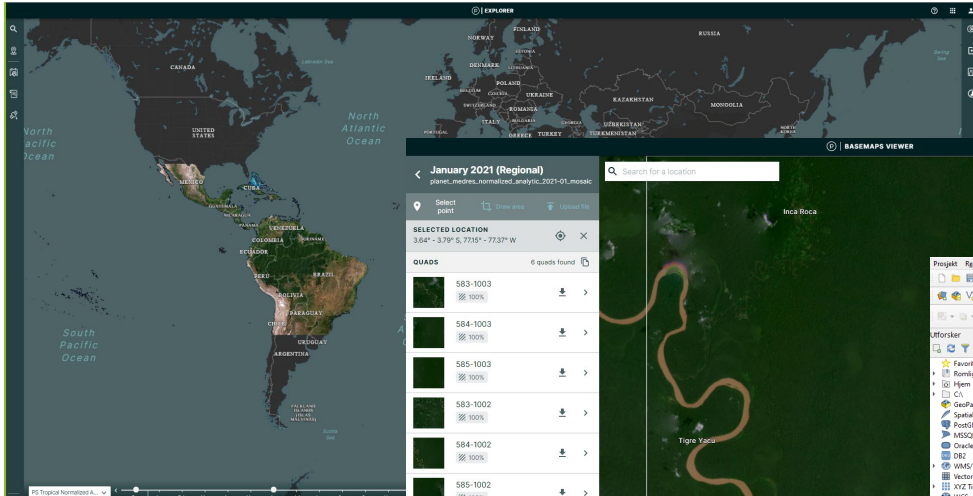
The image displays three distinct web-based platforms for satellite data visualization:

- Top Left: SentinelHub**
  - Dataset: Planet NCFI Basemaps by SINERGISE
  - Date: 2022-04-30
  - Legend: Shows six classes: 1. Floresta (Forest), 2. Formação Natural não Florestal (Non-forest natural formation), 3. Agropecuario (Agriculture), 4. Área Não Vegetada (Non-vegetated area), 5. Água (Water), 6. Não Observado (Not observed).
  - Map: Shows a satellite view of West Africa, including Nigeria, Chad, and Sudan.
- Top Right: Planet Explorer**
  - Map: Shows a satellite view of East Africa, including Sudan, Eritrea, and Ethiopia.
  - Statistics: Visualization por classe (Level 1 - 2020).
  - Scale: 150000.84 km².
- Bottom: Global Forest Watch**
  - Map: Shows a satellite view of Central Africa, including the Central African Republic and South Sudan.
  - Legend: No layers selected.
  - Planet Satellite Imagery (TROPICS) settings:
    - Period: Apr 2022
    - Image Type: Natural color

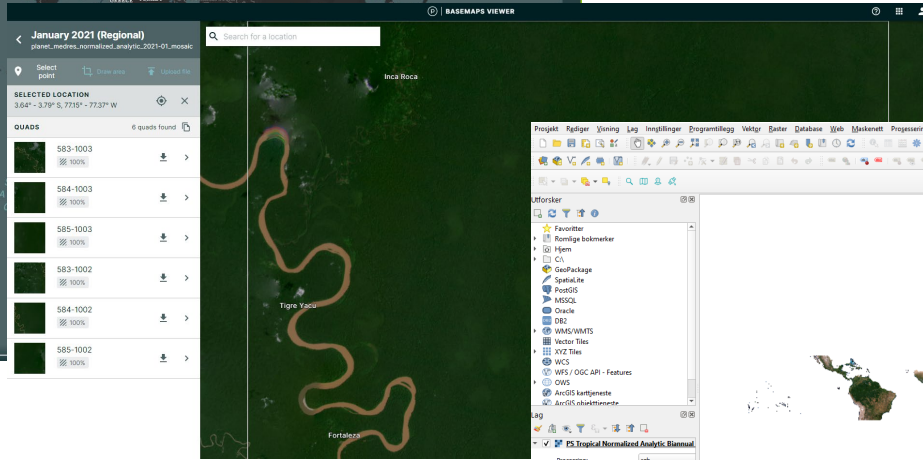




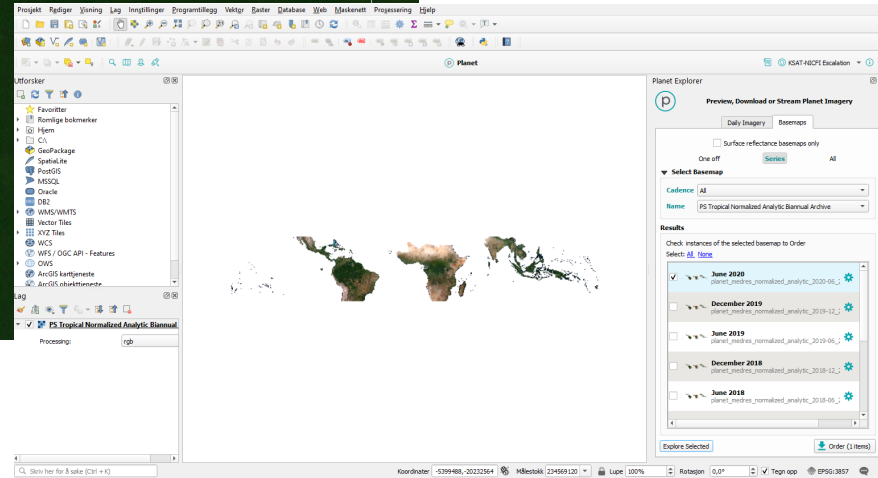
# Visualisation, Download and Streaming



[www.planet.com/explorer](http://www.planet.com/explorer)



[www.planet.com/basemaps](http://www.planet.com/basemaps)



QGIS/ArcGIS Integrations





Google Earth Engine

# Full Tropics in High-Res in Google Earth Engine

Bringing the power of cloud-based time series analysis to high-resolution, pantropical forest monitoring



**Time Series of High-Res NICFI Planet Tropical Basemaps, from archive through monitoring term.**  
Time series illustrated in Google Earth Engine.

Source: UN-FAO. Presented at Global Forest Observations Initiative Plenary, 2021.



# + Where to Access [www.planet.com/nicfi](http://www.planet.com/nicfi)

## Norway's International Climate and Forests Initiative Data Program

Through Norway's International Climate & Forests Initiative (NICFI), users can now access Planet's high-resolution, analysis-ready mosaics of the world's tropics in order to help reduce and reverse the loss of tropical forests, combat climate change, conserve biodiversity, and facilitate sustainable development for non commercial uses.

LEARN MORE  
FROM USERS

SUPPORT RESOURCES

HELP DESK

SIGN UP





## NICFI SATELLITE DATA PROGRAM

[developers.planet.com/nicfi](https://developers.planet.com/nicfi)  
[university.planet.com/path/nicfi](https://university.planet.com/path/nicfi)  
[nicfi-servicedesk@ksat.no](mailto:nicfi-servicedesk@ksat.no)

NICFI Community Platform coming Summer 2022

### **Other Living Planet sessions with NICFI program content:**

- *Wednesday 10.45am Room H1-05: SEPAL Workshop*
- *Thursday 11.25am Room H1-01 session E1.04.1 Space Capacity Building - The rise of public-private partnerships as a tool for sustainable development: Lessons learned from the NICFI Tropical Data Program*
- *Thursday 12.30 GEO Indigenous Networking event Towards COP27: Environmental Equity and Indigenous Climate Leadership*

[rainforest@ksat.no](mailto:rainforest@ksat.no)



**AIRBUS**