



Food and Agriculture Organization  
of the United Nations

**TWENTY-NINTH  
SESSION OF**

**THE ASIA  
AND PACIFIC COMMISSION  
ON AGRICULTURAL  
STATISTICS**

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**Open Foris - free and open  
source tools and methods for  
data collection, analysis and  
reporting**

**APCAS29**

**Julian Fox, Team Leader**  
National Forest Monitoring  
Forestry Division - FAO

## Free and open source tools and methods for data collection, analysis and reporting



### Arena

Online platform for survey design, data management, utilization and processing



### Collect

Easy and flexible survey design and data management



### Collect Mobile

Intuitive data collection and validation in the field



### Calc

Efficient and collaborative data analysis and results dissemination



### Collect Earth

Easy and flexible survey design and data management



### Collect Earth Online

Online Land Monitoring tool for crowd-sourcing of augmented visually interpreted data



### Earth Map

The power of Google Earth Engine without coding. A user friendly tool for complex land monitoring



### SEPAL

System for earth observation, data access, processing, analysis for land monitoring

# Key principles

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- **FAO-led** initiative
- **Free and open source:** approx. 30,000 downloads since 2016; source codes are available in [GitHub](#).
- **Software development:** new and improved versions of the tools are released periodically.
- **Collaboration:** FAO [Hand-in-Hand](#) Initiative; private and public partners (e.g. Google, NASA-Servir); academic institutions; projects.
- **Country testing:** OF tools have been used in more than 130 countries.
- **Capacity building:** training sessions on all OF tools in all regions of the world.
- **Implementation:** more than 44 countries have integrated OF tools in their forest monitoring systems.



# Open Foris Collect

Survey design

Data entry, management and validation  
(reporting)



# openforis COLLECT MOBILE

97% 14:39

← PNG NFI

CLUSTER > PLOTS [1] > Details

Start Date	GPS reading location
Start Time	GPS reading  This field is required Latitude coordinate (6 digits, negative), GPS X Longitude coordinate (6 digits), * Use averaging function, if available!
Recorder	
Plot Centre Location	
Elevation	Spatial Reference System: EPSG:4326
Elevation (GPS Reading)	x
GPS reading location	y
Plot Centre Distance	START GPS
Number of GPS Readings	
Slope Angle	
Slope Direction	
Slope correction done?	
Plot Centre Description	

Plot ID: Center (C) (Plots)  
Cluster No: 18779 (Cluster)



# Open Foris Calc

Data processing and reporting  
with R language scripts



# Open Arena

Cloud-based application joining  
the main features of  
Collect and Calc

Launched in 2021

Developed with  
support of

UN-REDD  
PROGRAMME



Food and Agriculture  
Organization of the  
United Nations



UN  
environment  
programme



## WHAT IS ARENA?

- Arena is a new Open Foris (OF) application that offers tools for storing, managing, and processing survey data
- Arena works in a secure cloud server
- Arena combines the main features of OF Collect and Calc



## WHAT ARE THE ADVANTAGES?

- It enables **collaboration** and **data sharing** in a working group
- **Easy maintenance:** updates instantly available for all users
- **No need for per-user installations**
- Arena 1.0 is a starting point for a new generation of online tools. It offers a technical platform which **will be expanded.**



# Collect Earth

Visual interpretation tool for land use/cover classification and change detection with access to high and very high resolution satellite imagery

# Augmented Visual Interpretation

- Data Collection tool integrated in Google Earth.
- Free access to Very High Resolution imagery.
- Multitemporal imagery thanks to Google Earth, Bing Maps and High Resolution Imagery from Google Earth Engine.

The screenshot displays the Google Earth Pro interface with a data collection tool overlaid on a satellite image of a forested area. The tool includes a grid of yellow squares for data collection and a panel for selecting the latest vhr image and viewing vegetation statistics.

**Vegetation Statistics:**

Vegetation type	Vegetation cover
Tree	40-49%
Shrub	0%
Palm	0%
Bamboo	0%
Crop	0%

**Tree Count:** 17

**Shrub Count:** Nothing selected

**Tree Count Table:**

Tree Count
17

**Shrub Count Table:**

Shrub Count
Nothing selected

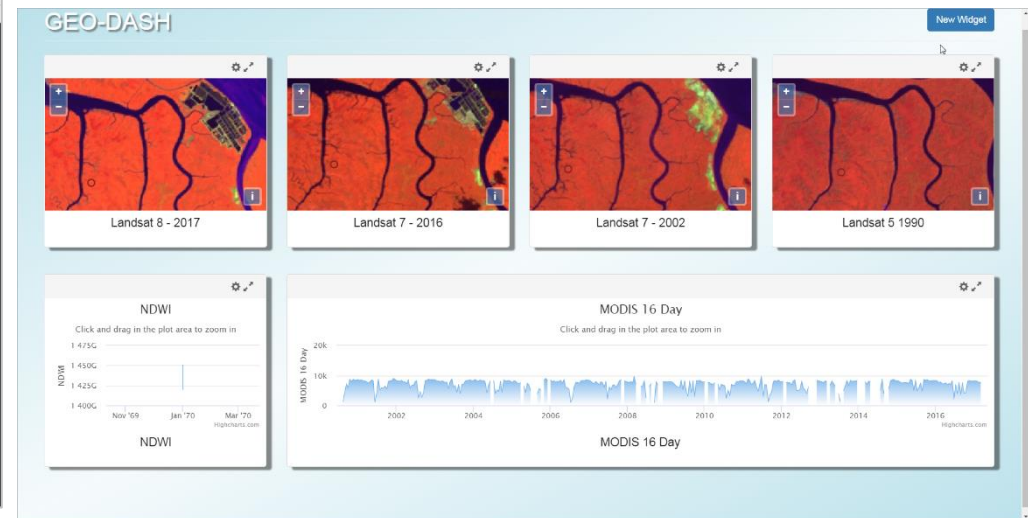
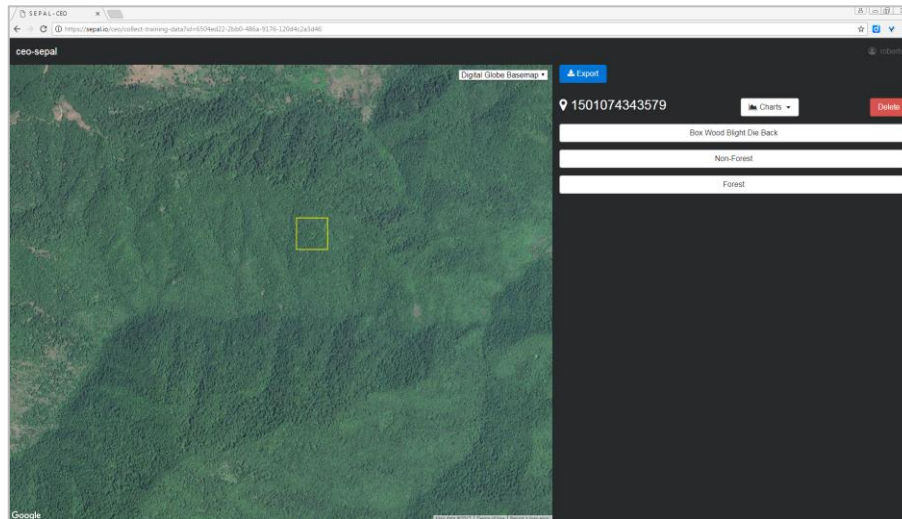


# Collect Earth Online

Visual interpretation tool for land use/cover classification and change detection with access to high and very high resolution satellite imagery

# About Collect Earth Online

- Developed in collaboration with NASA-SERVIR and FAO.
- Online application for crowdsourcing and centralized assessments. Multiple users can simultaneously collect information.
- Register and get access: <http://collect.earth/>



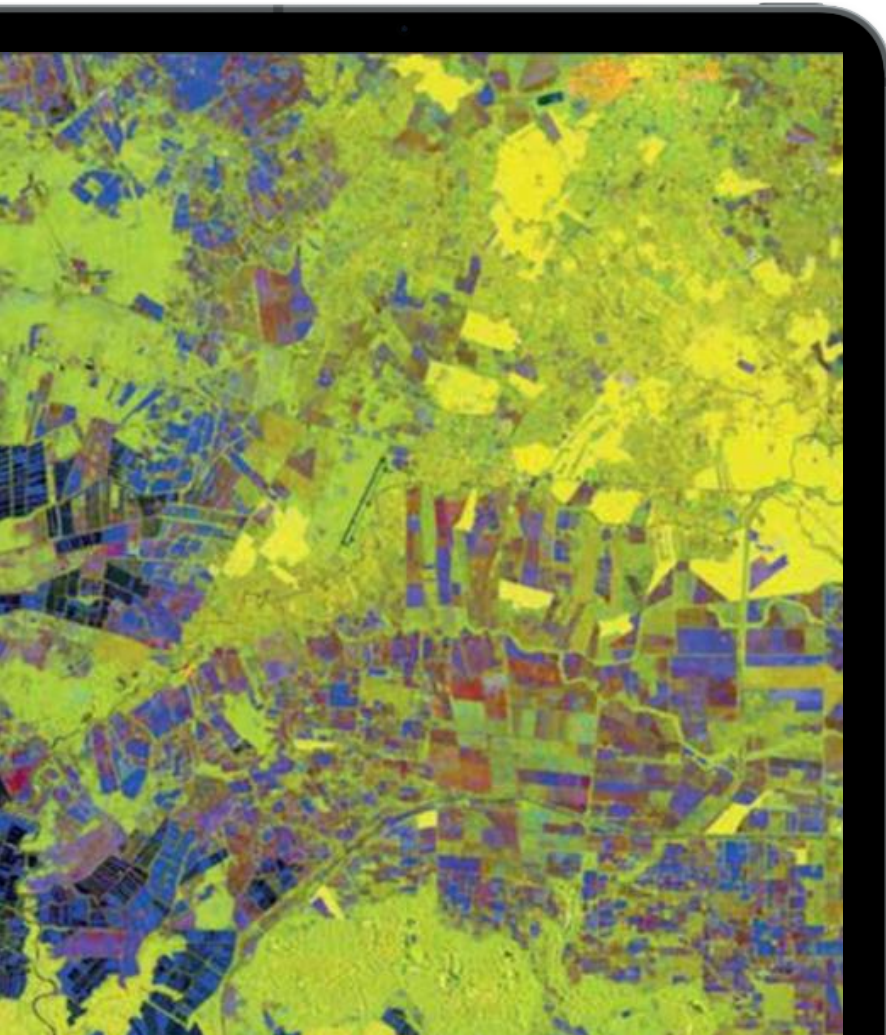


# Earth Map

The power of Google Earth Engine  
without coding. A user friendly tool for  
complex land monitoring

# SEPAL

## System for Earth Observation Data Access, Processing and Analysis for Land Monitoring



Innovative open-source software to help countries measure, monitor and report on forests and land use, offering unparalleled access to granular satellite data and computing power and paving the way for improved climate change mitigation plans and better informed land-use policies.

**7000**

active users

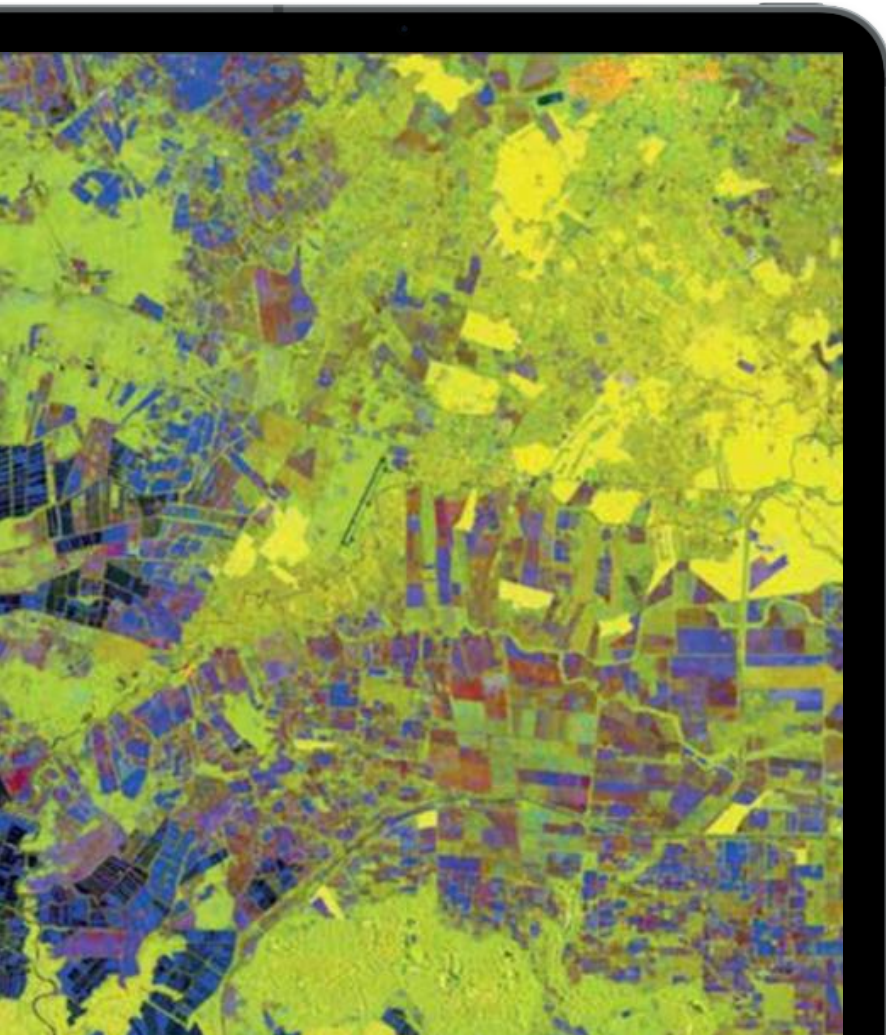
**225**

organizations

**130**

countries

# SEPAL Phase II – Forest and Land Monitoring for Climate Action



Expand use and application of NICFI-Planet data

Develop the SEPAL platform to be even easier to use for critical forest and land monitoring needs

Apply innovative capacity development methods to reach all 64 countries included in the NICFI-Planet data program

Develop user-friendly applications of the NICFI-planet data

Country level engagement



ENHANCED BY Google

☰ All Questions

- 0 votes 1 answer 27 views

**Earth Map is not loading - white window**

[earthmap](#) 2 days ago EarthMap ♦♦ 11
- 0 votes 1 answer 22 views

**How can I download the imagery from Earth Map?**

[earthmap](#) 17 Mar, 15:08 EarthMap ♦♦ 11
- 0 votes 0 answers 16 views

**CollectEarth Installation Error**

[collectearth](#) 16 Mar, 06:57 tpacific 11
- 0 votes 3 answers 54 views

**How do I define the path to locate requested files in a survey?**

[collect](#) 12 Mar, 22:53 OF Collect ♦♦ 3.5k
- 0 votes 2 answers 52 views

**Generating grids with Google Earth Engine: error**

[collect](#) [collectearth](#) 12 Mar, 20:52 silverbetula 11
- 0 votes 3 answers 57 views

**getting GPS time stamp on mobile app**

[collect-mobile](#) 12 Mar, 16:32 OF Collect ♦♦ 3.5k
- 1 vote 7 answers 1.8k views

**Default value for tree species**

[collect](#) 12 Mar, 07:40 wexxo 106

**welcome to Open Foris Support**

Ask and answer questions, make the Open Foris better!

[about](#)  
[faq](#)

**845** questions  
**1665** answers

Most **recently updated** questions

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Access the **Wiki in Github**

Our **Github page**

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[geospatialtoolkit](#)  
[saiku](#)



**WELCOME !**

<http://openforis.org/>

<https://github.com/openforis/>