

FOREST SCAN

A low-cost, **blue carbon**
pre-assessment tool



The Challenge

Why early-stage blue carbon projects struggle to get off the ground ?

Mangroves are disappearing — yet they're vital for **climate, biodiversity, and coastal protection**



Many tools provide rich environmental data, but **few are built for early-stage blue carbon project needs.**



Without clear, usable insights and data, **promising blue carbon projects struggle to reach funding, fieldwork, or impact**



Between data and action, a critical link is still missing

Our Mission

Democratize access to blue carbon insights.

To **democratize environmental intelligence** and **bridge the gap** between **data and action**, empowering frontline actors with the tools to **monitor, protect, and restore mangroves**.

We envision a world where:



Anyone can harness satellite data to drive local action



Mangroves are **valued, protected, and restored at scale**



Data bridges the gap between **communities, science, and policy**

The Tool at a Glance

FOREST SCAN is a cost-effective tool that supports the early stages of blue carbon project development. It leverages open-source satellite data and machine learning to deliver critical environmental insights, such as historical deforestation rates and detailed land classifications for targeted regions.



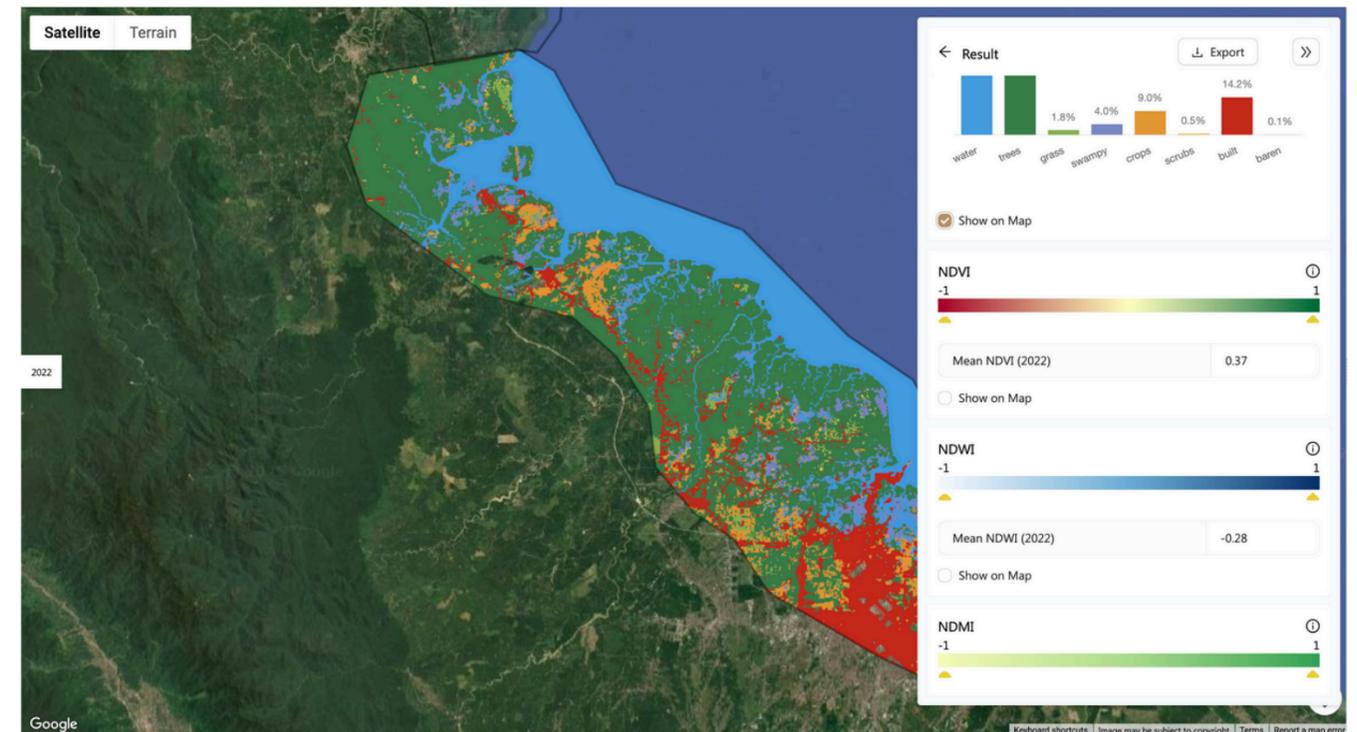
Track historical deforestation.



**Classify land use
(mangrove, agriculture, aquaculture, etc.).**



Provide early carbon storage estimates.



Forest Scan is a lightweight browser tool that turns satellite data into insights, already covers across 16,000+ km² with up to 5 years of forest data history, delivering analysis in a matter of seconds.

Who It's For

Designed for impact-driven actors on the frontlines of mangrove conservation

Target Audience



NGOs & Local Communities

Planning and executing mangrove restoration



Academia & Researchers

Turning field data into knowledge that supports global conservation



Policy Planners

Making informed land and climate decisions.

Designed for Field Teams Like Yours

Value Proposition

Bridging Science and Action

Forest Scan transforms raw satellite data into clear, site-specific insights to accelerate conservation planning and early-stage funding.



Powerful & Actionable Metrics

Provides powerful metrics to understand mangroves both historically and in real time, enabling better targeted conservation.



Easy to Use

No GIS expertise needed. Just draw your project area and get export-ready insights in seconds.



Built for Regional Scale

Already deployed in Indonesia and Vietnam, with potential to expand as new regions and partners come onboard.



Key Features

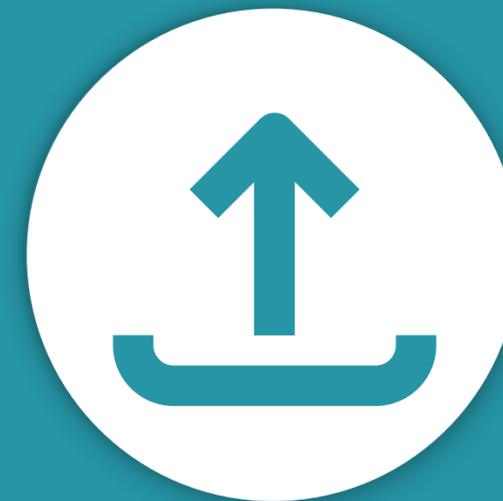


Select a Region

Draw directly on the map or upload shapefiles to define your project area (e.g., North Sumatra, Indonesia)

Classify forests, measure canopy and carbon shifts, track land cover change, and identify deforestation hotspots, in a matter of seconds

Get Actionable Insights



Export & Use

Download GeoTIFFs for diverse applications such as feasibility assessments, research, or early project planning (other export formats coming soon)



Draw

1 Select the area

Analysis

Location

Quick zoom into one of the following areas which have a wide range of data sets available

Select area

- Aceh, Indonesia
- North Sumatra, Indonesia
- Mekong Delta, Vietnam

2 Select the year

Analysis

Location

Quick zoom into one of the following areas which have a wide range of data sets available

Aceh, Indonesia

You can pick a location directly from the map

Date range

Choose a year

Year

- 2019
- 2020
- 2021
- 2022
- 2023
- 2024

Click or drag file to this area to upload
Recommended file size is 1MB or less.

View Analysis Results

3 Draw on the map your area of interest

OR Upload your shape file

Analysis

Location

Quick zoom into one of the following areas which have a wide range of data sets available

Aceh, Indonesia

You can pick a location directly from the map

Date range

Choose a year

Year

2020

Analyse & Track a specific area - (optional)

Option 1
Draw in the map the area you want to analyze

Start Drawing

Option 2
Upload shape file

Click or drag file to this area to upload
Recommended file size is 1MB or less.

View Analysis Results



4 Validate your choice

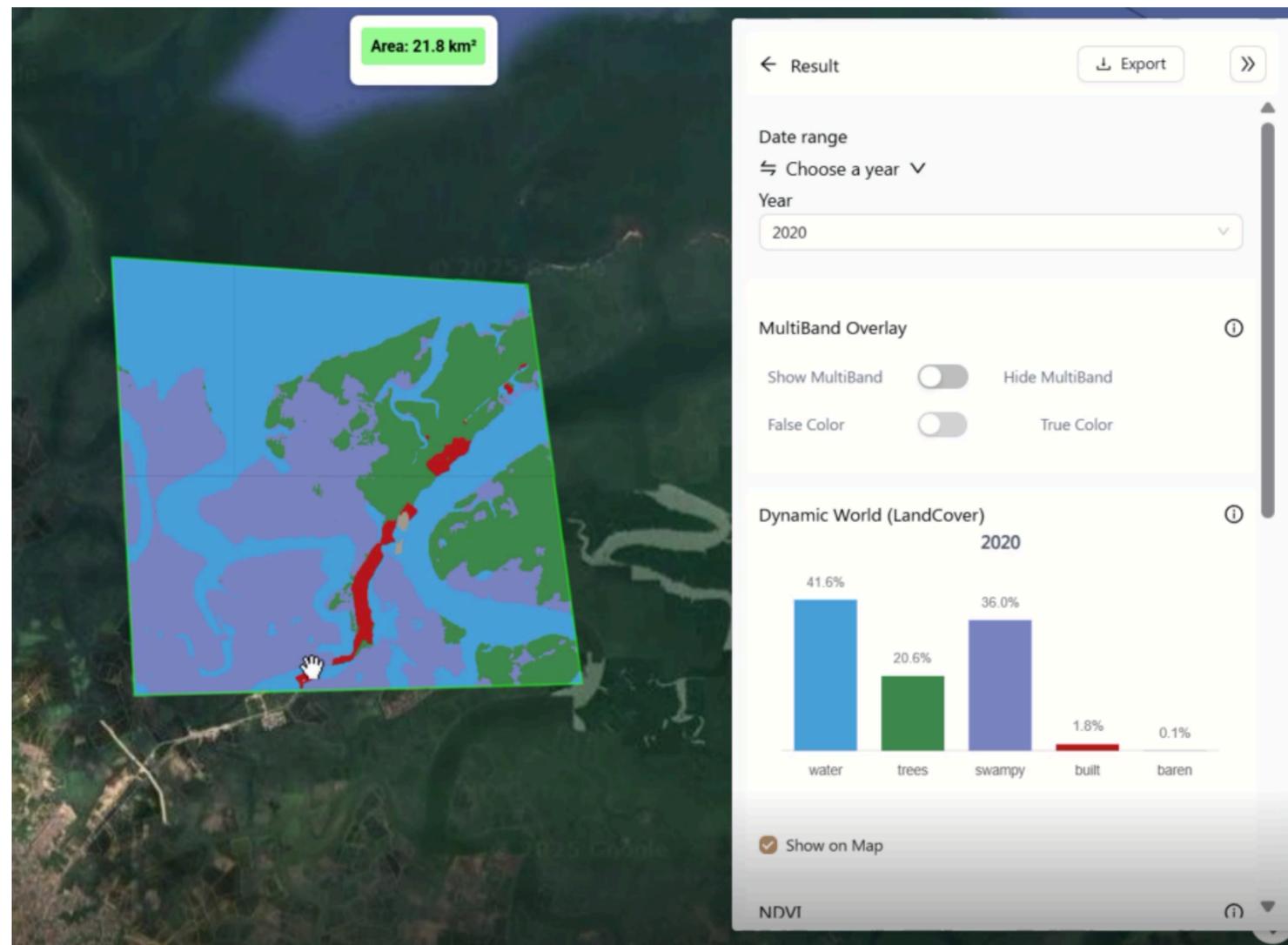
View Analysis Results



Analyse

- Show on Map
- Show on Map

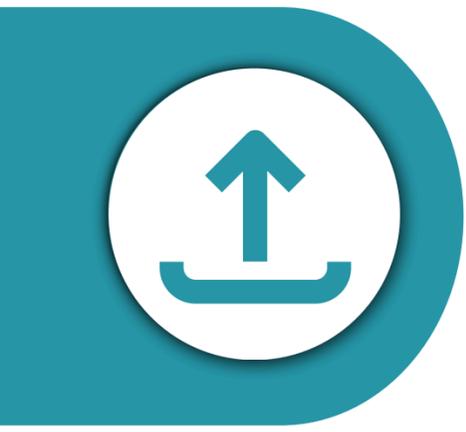
Select the metrics you want to show on the map.



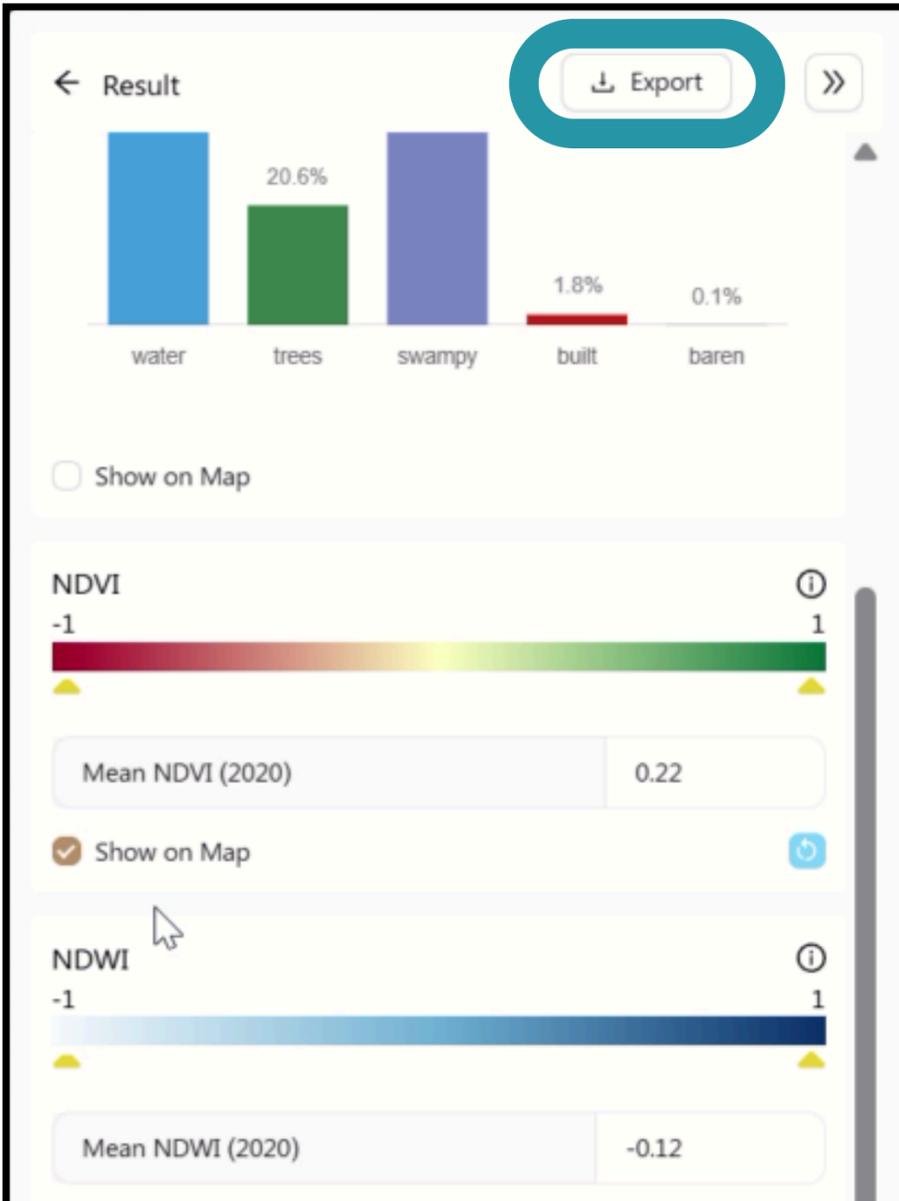
Dynamic World (LandCover)



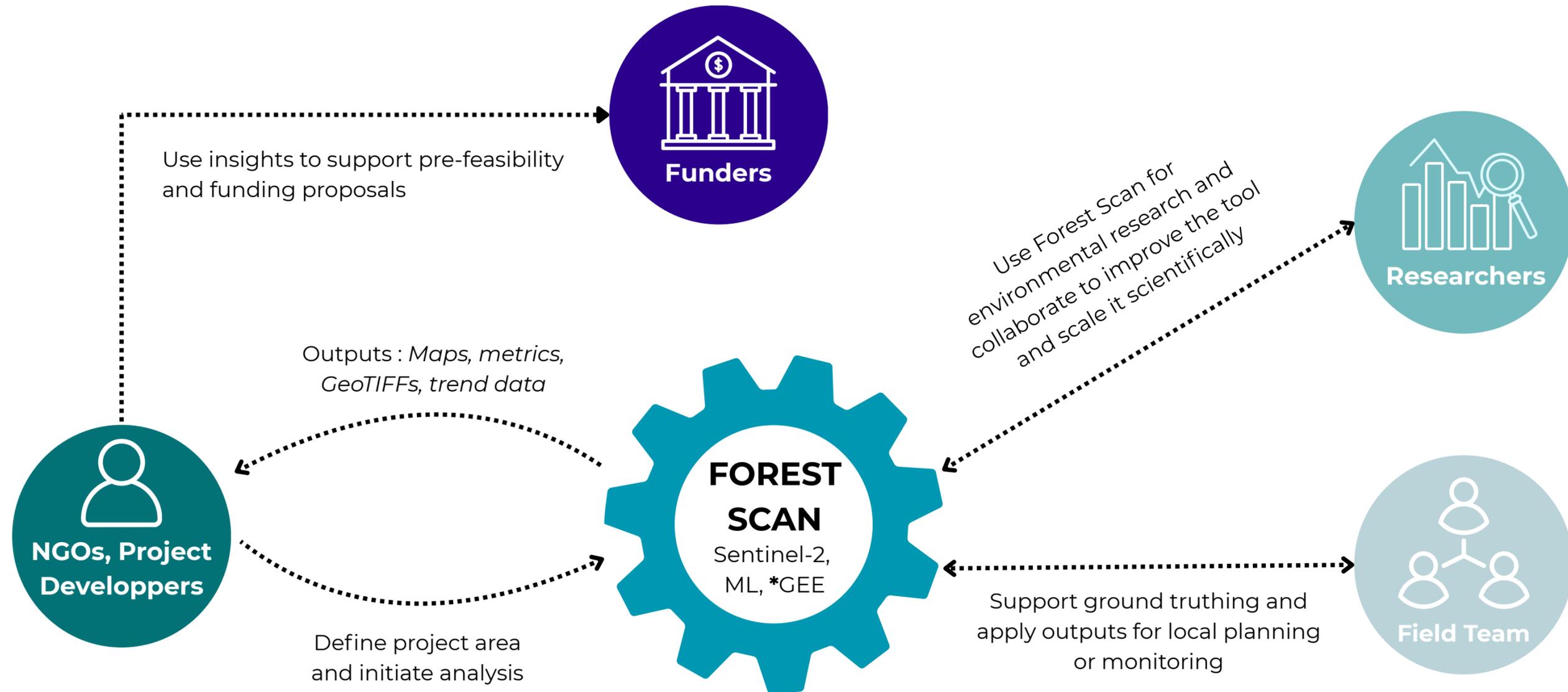
NDVI



Export & Use



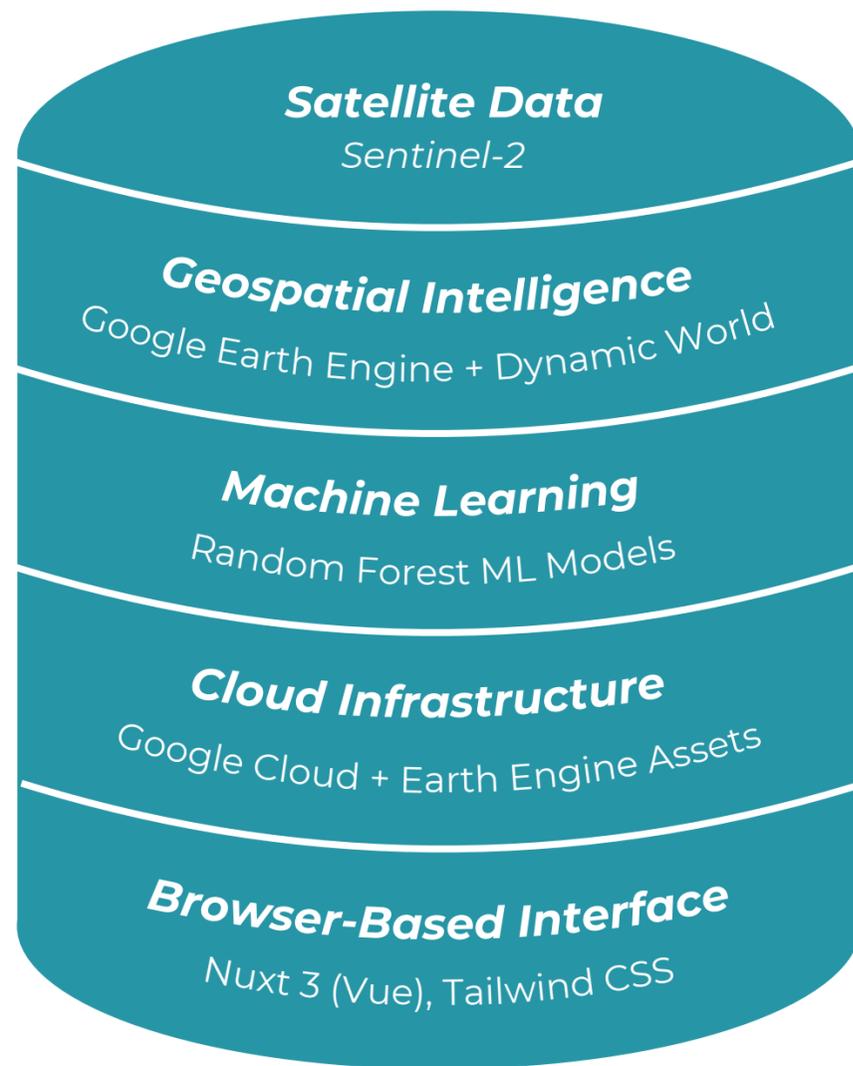
How it works in context



Transforms satellite data into insights to support planning, funding, and research.
Powered by Sentinel-2, *GEE, and ML
Outputs: maps, metrics, GeoTIFFs, carbon trends

What Powers Forest Scan

Advanced satellite intelligence, simplified for real-world action.



Built with Trusted Tools

| Component | What It Does |
|--------------------------------|--|
| Google Earth Engine | Satellite data processing & analysis |
| Dynamic World | Real-time land cover classification |
| Random Forest ML Models | Classifies forest, water, cropland, etc. |
| Google Cloud Run | Runs everything fast and reliably |
| Nuxt 3 + Tailwind CSS | Builds the app interface you see |

Get fast, accurate land insights, powered by trusted open tools and real-time satellite data.

Next Steps

01

Test with more users on the ground

Make sure Forest Scan delivers value in real project settings.

02

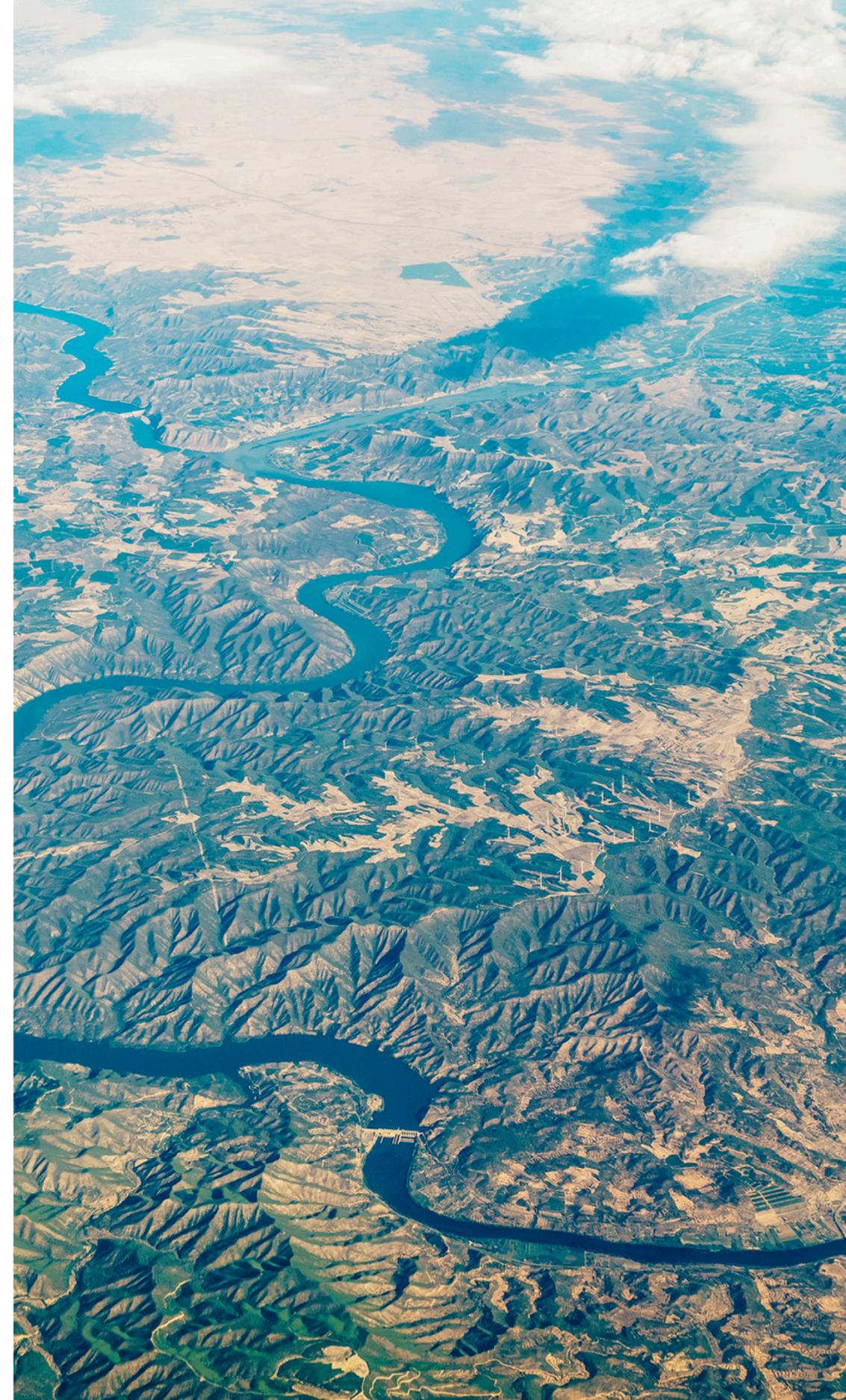
Launch next-gen version

Enhance ML, expand exports, and add carbon logic (e.g. OxCarbon) with field validation

03

Seek institutional partners

Support co-validation, research, and regional scale-out



Test Forest Scan With Support From Our Team

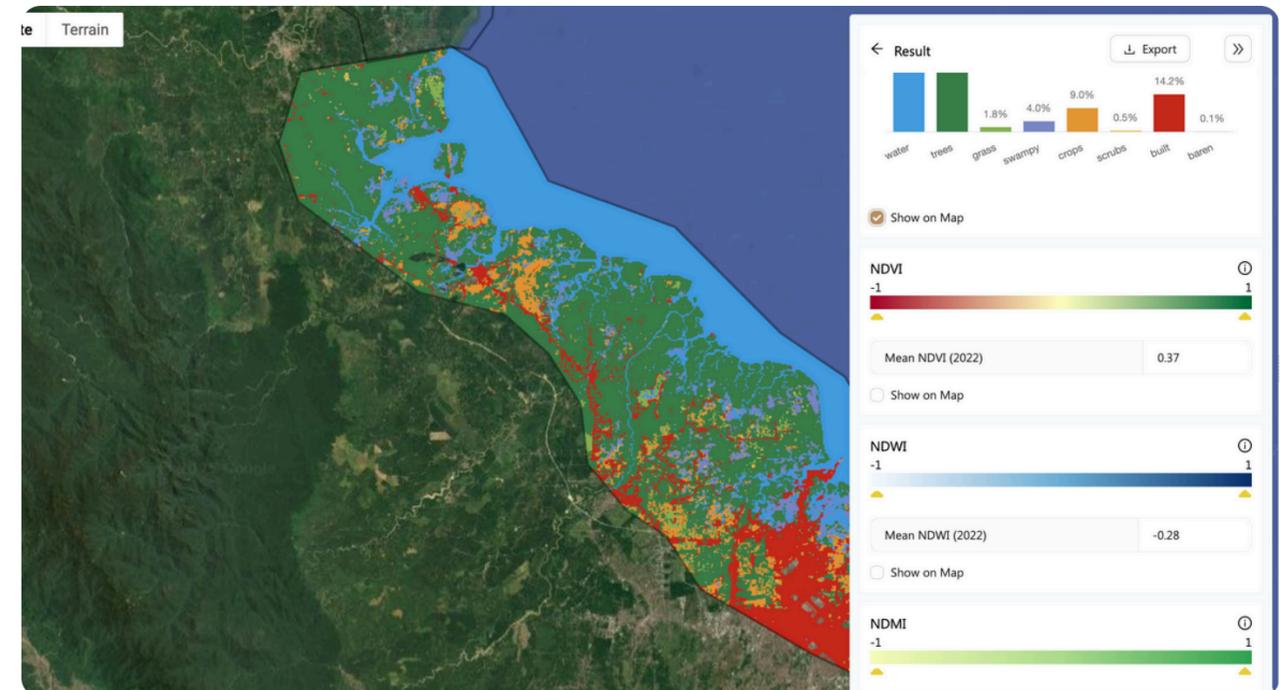
Try Forest Scan With a Real Project



Explore how Forest Scan fits your project with a **tailored pilot**.



Our team will **guide you** through the first steps: **fast, simple, and setup-free**.



Contact us and book a short discovery session to get started.

forest-scan@globalmangrove.org

Meet the Team



Dr. Ryan Merrill
**Co-Founder &
Executive Secretary**



Dr. Simon
Schillebeeckx
Co-Founder & Director



Matteo de Besi
Senior Advisor



Dr. Mohamed
Abdelwareth
Lead Project Analyst



Srividya
Thanikachalam
Finance Officer



Wynne Gitau
Solution Engineer



Celeste Tan
Data Analyst



Nouhaila
Ed-dlimi
Solution Analyst



Ipyana
Mwasambili
ESG Analyst



Siddharth Samal
Communications Lead



Malak Grioui
Solution Analyst



Laura Weiß
Development Fellow



Scan for Survey

We Value Your
FEEDBACK!