



22 October 2025 | 8.00am - 6.00pm | 6.00pm - 7.30pm
Grand Ballroom, Grand Hyatt Kuala Lumpur



THE FUTURE IS NOW:
**ACCELERATING
SUSTAINABLE
TRANSFORMATION**

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ACCELERATING A SUSTAINABLE FUTURE



NATURELOOP



SUSTAINABLE ACTION CONFERENCE 2025
MDBC INNOVATION & SUSTAINABILITY AWARDS

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THE FUTURE IS NOW:
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INNOVATIVE SUSTAINABLE SOLUTIONS: The CarbonSpace Way

Mr. Izet Zamri

Key Account Manager (Asia) and Senior
Business Development Manager
CarbonSpace



INNOVATIVE SUSTAINABLE SOLUTIONS: THE CARBONSPACE WAY

SUSTAINABLE ACTION CONFERENCE
22ND OCTOBER 2025

CURRENT PRACTICE OF INDIVIDUAL POOL ACCOUNTING

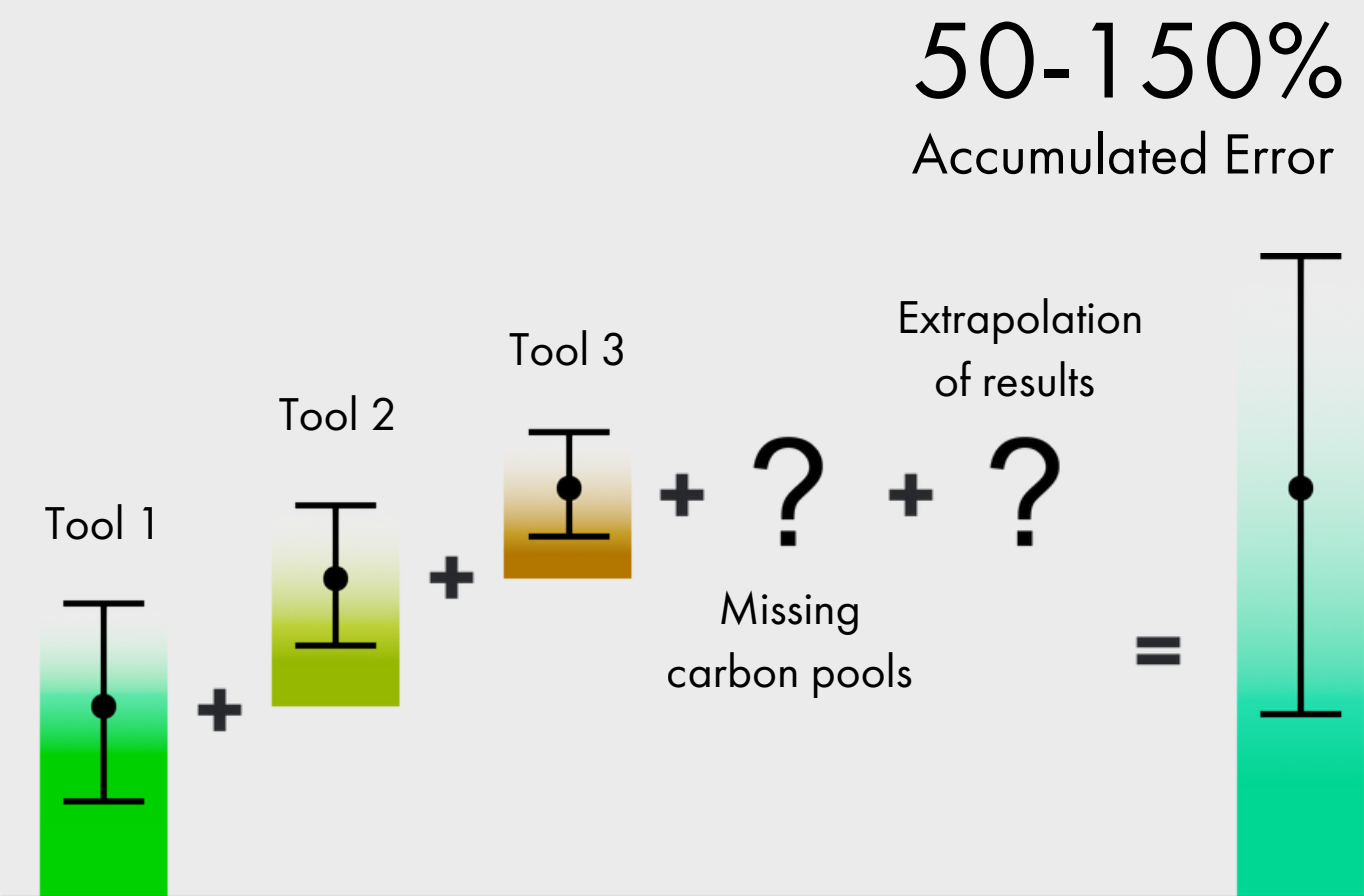
ACCUMULATE ERROR

Legacy Approach: Separate Carbon Pool Accounting

Combination of tree allometry,
soil samples and other biomass
measurements



	<i>Estimated Error</i>
Above-ground biomass	5-25%
Below-ground biomass	10-30%
Soil organic carbon	10-30%
Dead organic matter	15-50%



Existing methods have a low ceiling of accuracy by design and are doomed to fail at one point.

A better monitoring system is needed.

A NEW LAND CARBON ACCOUNTING APPROACH IS NEEDED!

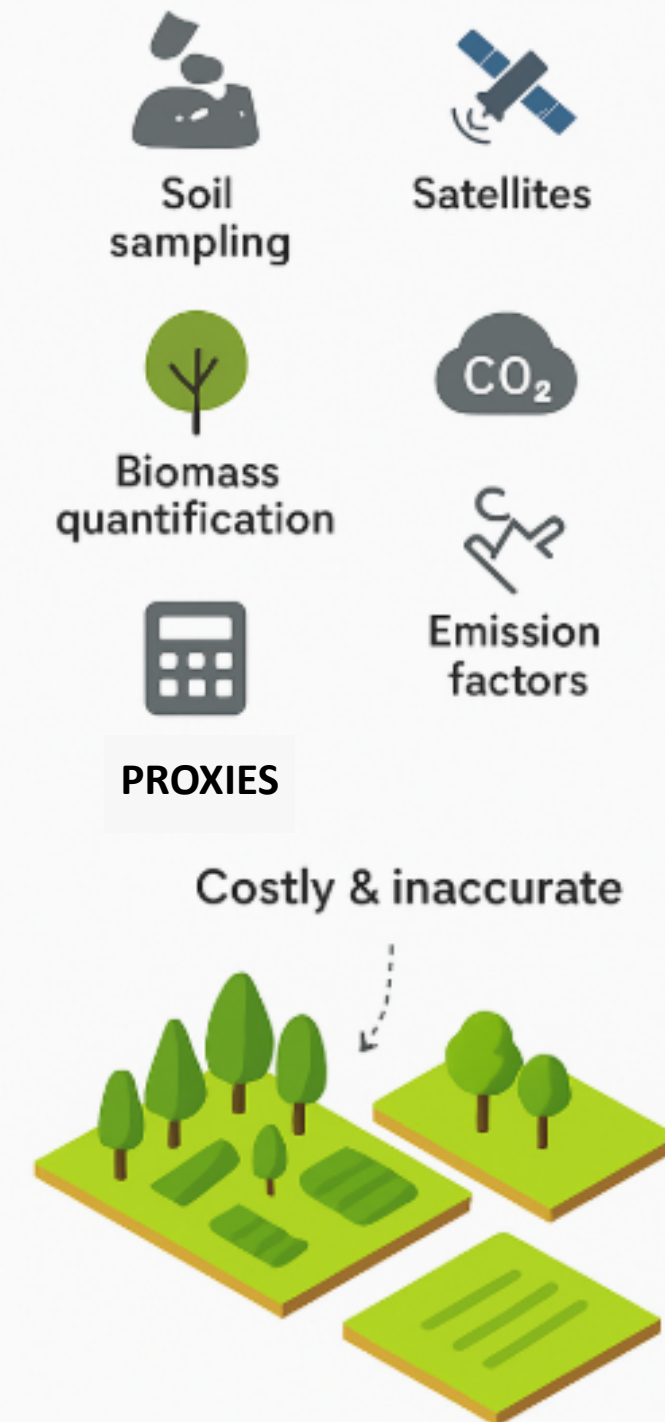
Today best practice land use carbon accounting is outdated!

Soil sampling, satellite-only analysis, biomass quantification, CO₂ conversion methods, emission factors, and proxy-based estimates.

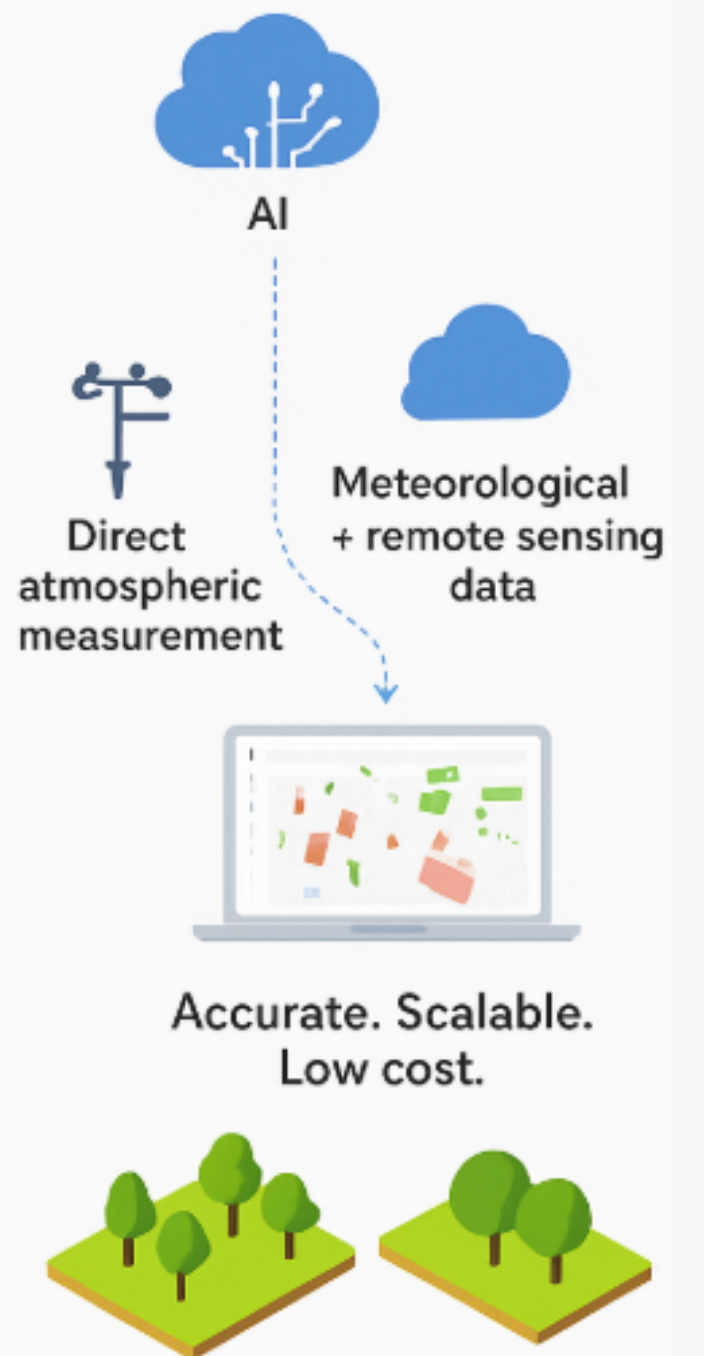
--> At scale, they are inaccurate and costly.

CarbonSpace exists to make land use carbon accounting scalable, accurate and low cost by leveraging AI and direct atmospheric measurements.

Traditional carbon accounting



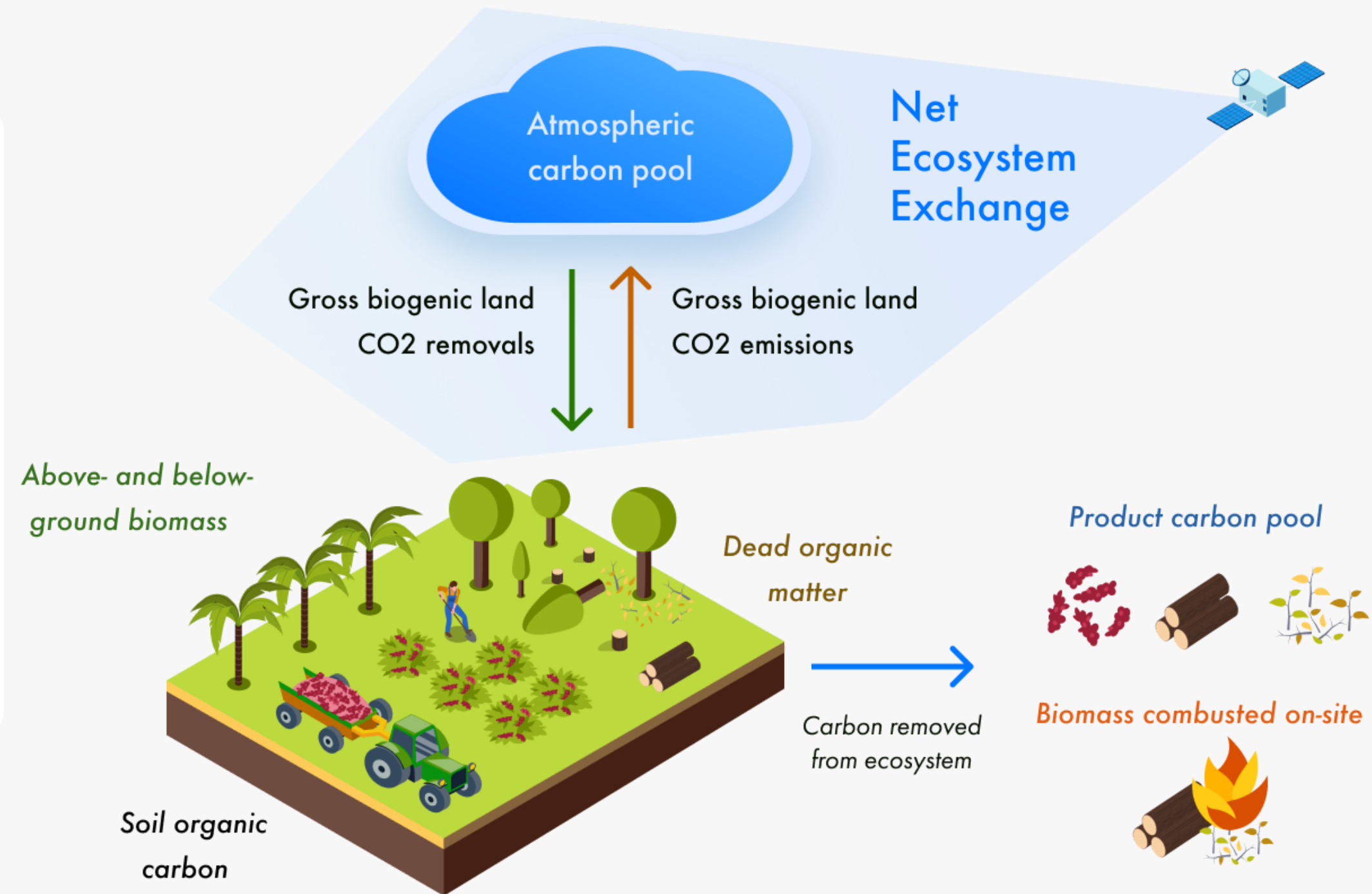
CarbonSpace approach



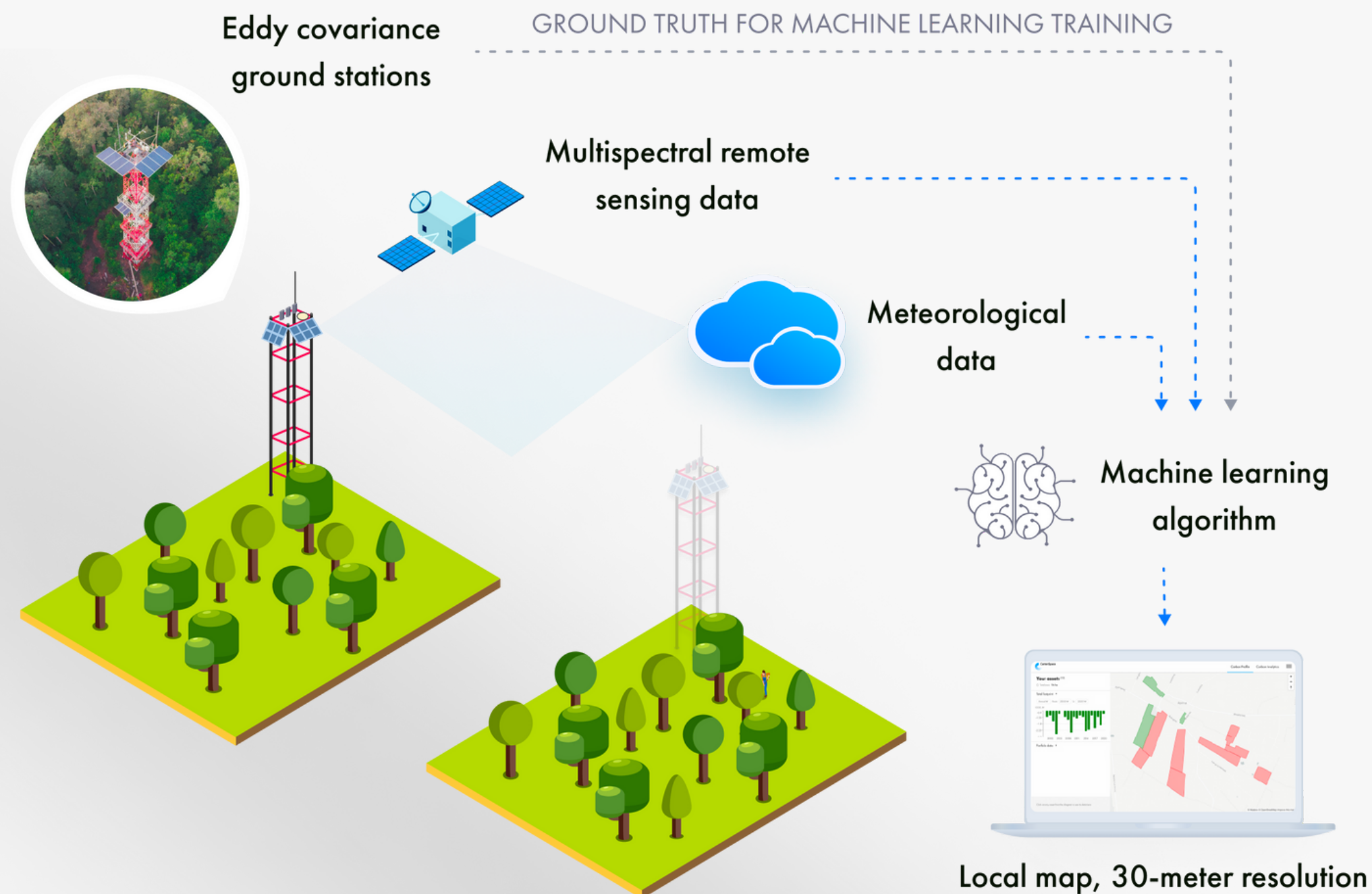
ECOSYSTEM-LEVEL APPROACH

CarbonSpace monitors **net ecosystem exchange (NEE)**: an ecosystem-level approach to monitoring carbon changes.

NEE is a verified benchmarking tool for carbon performance that enables baselining, target setting, ex-post monitoring and the 3rd party verification of supply chain initiatives



CARBONSPACE IS THE **GLOBAL LEADER** IN ECOSYSTEM-BASED MEASUREMENT TO MONITOR, REPORT & VERIFY CARBON



- We measure carbon directly in the atmosphere, where climate change happens
- ML-based, fully-remote direct measurements of atmospheric carbon

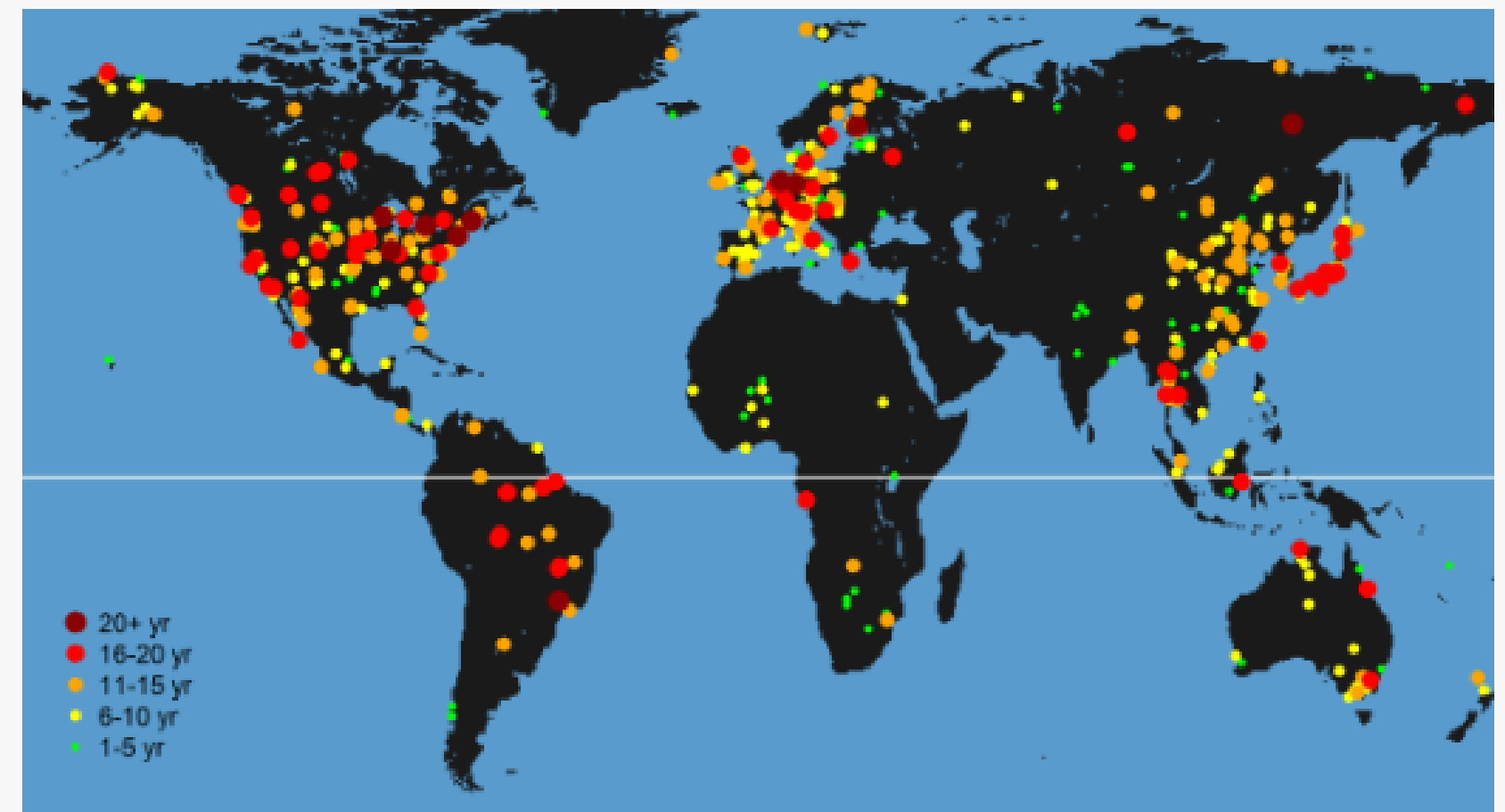
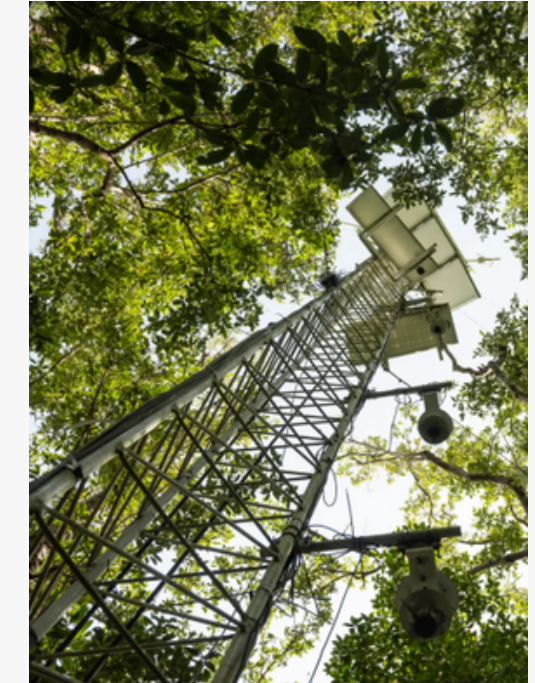
[Read our peer-reviewed methodology.](#)



HOW IT WORKS: PRIMARY DATA FROM EDDY COVARIANCE STATIONS

What does an eddy co-variance station do?

- Widely adopted in the scientific community for over 40 years
- Measures gas fluxes between the land surface (ABG, BGB, SOC, DOM) and the atmosphere every 30 minutes
- We use data from global FluxNet network of eddy covariance (EC) stations.
 - Over 1,000 sites and different land use systems using the scientifically validated EC method and collecting CO₂ flux data. <https://fluxnet.org/sites/site-summary/>
 - AsiaFlux and private flux towers in Malaysia and Indonesia are being added
 - Any additional flux tower added to the data ecosystem improves the CarbonSpace model quality



VERIFICATION AND CERTIFICATION

Peer-reviewed, published approach: MDPI's Journal of Remote Sensing



Third-party verified in accordance with ISO14064-3 by Control Union



Methodology accepted by global scientific communities and standards



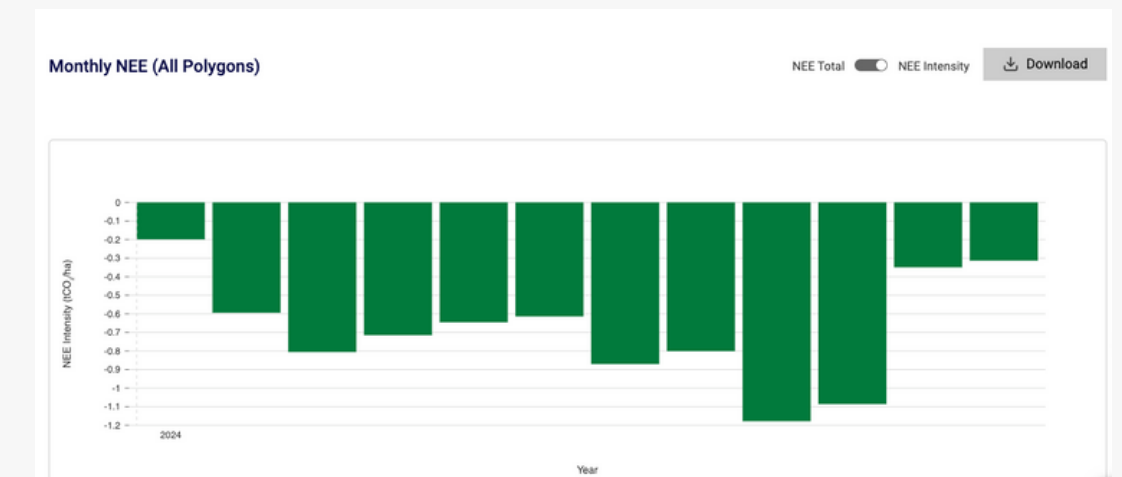
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STANDARD

RESULTS DELIVERED TO A PALM OIL COMPANY

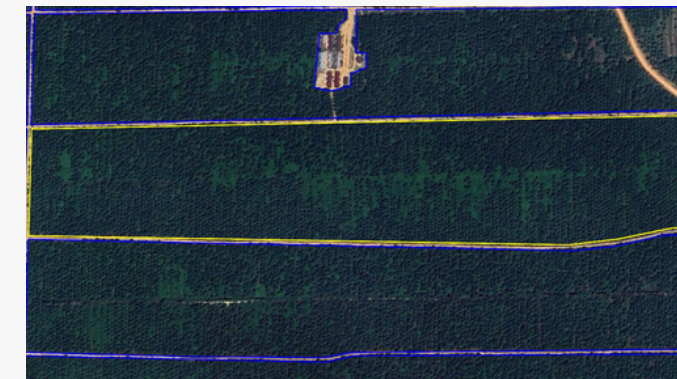
CarbonSpace had calculated NEE data for 1,506 polygons (20,365 ha). This data helped us understand how carbon is emitted or sequestered based on land use types and interventions



Monthly NEE values for a palm plantation in Indonesia

- Polygon A: mature oil palm plantation
 - -23.9 tCO2/ha/year
- Polygon B: Young oil palm plantation
 - -1.5 tCO2/ha/year
- Polygon C: Cleared land / newly planted oil palm
 - 1.5 tCO2/ha/year
- Polygon D: Conservation forest
 - -7.8 tCO2/ha/year

POLYGON A



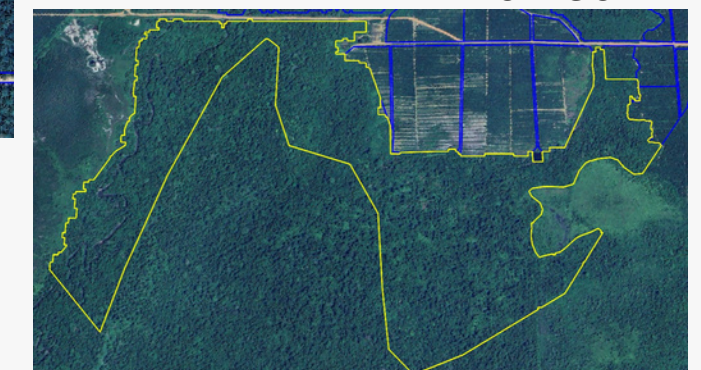
POLYGON B



POLYGON C



POLYGON D





THANK YOU