

Deforestation and the new EU regulation

Some implications in cocoa

Marieke Sassen, Eric Rahn, Christian Bunn and some Meine van Noordwijk

21 March 2021

EU Deforestation-free regulation

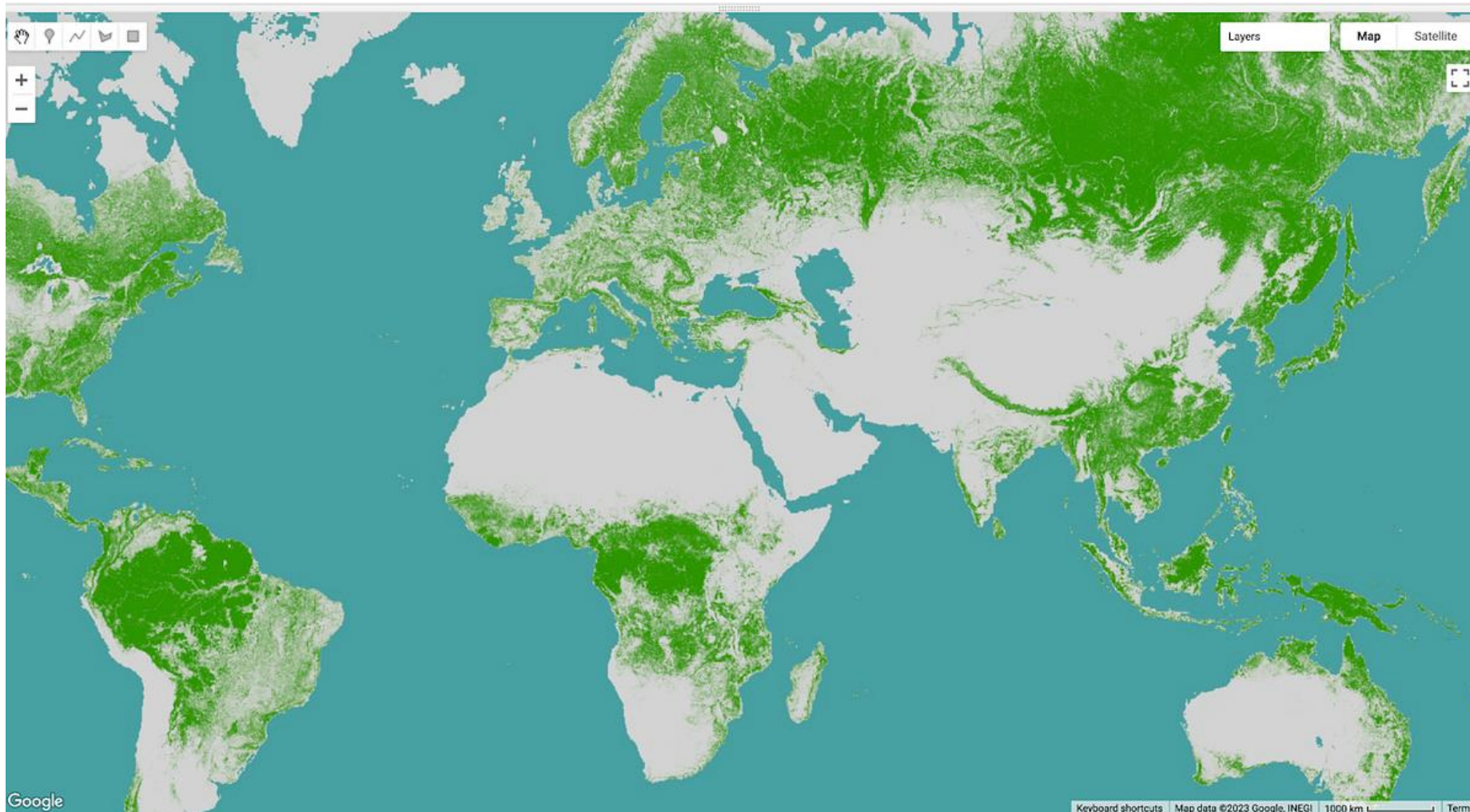
- **What:** Any deforestation, including legal, as well as forest degradation (cut-off date: 31.12.2020); + legal compliance with local laws
- **Who:** All operators and traders who place, make available or export the following products from the EU market: cattle, cocoa, coffee, palm oil, rubber, soy, and wood.
- **How:** Mandatory traceability to plot level; GPS points (or polygons) to be submitted in due diligence statement with each shipment; mandatory checks in proportion to risk-level of country
- **Starting when:** End of December 2024

Forest and deforestation according to the EU

Definitions in the EUDR (Article 2):

- ... (2.3) 'deforestation' means the conversion of forest to agricultural use, whether human-induced or not;
- (2.4) 'forest' means land spanning more than 0,5 hectares with trees higher than 5 metres and a canopy cover of more than 10 %, or trees able to reach those thresholds in situ, excluding land that is predominantly under agricultural or urban land use;
- (2.5) 'agricultural use' means the use of land for the purpose of agriculture, including for agricultural plantations and set-aside agricultural areas, and for rearing livestock;
- (2.6) 'agricultural plantation' means land with tree stands in agricultural production systems, such as fruit tree plantations, oil palm plantations, olive orchards and agroforestry systems where crops are grown under tree cover; it includes all plantations of relevant commodities other than wood; agricultural plantations are excluded from the definition of 'forest';
- (37) In line with FAO definitions, agroforestry systems, including where crops are grown under tree cover, as well as agrisilvicultural, silvopastoral and agrosilvopastoral systems, should not be considered forests, but as constituting agricultural use.

So where is forest?



JRC global Forest Cover map <https://forest-observatory.ec.europa.eu/forest/gfc2020>

THE EUDR compliant global forest map

JRC: “corresponds to the cut-off date [December 31, 2020] set in the [European Union Deforestation Regulation](#) (EUDR), [...]. [The 2020 Global map of forest cover map is a tool to help implement the regulation](#) and we are excited to announce that this dataset is available in the [Google Earth Engine Data Catalog](#).”

“spatially explicit representation of [forest presence and absence](#) for the year 2020 at 10m spatial resolution.”

“The use of the map will not automatically ensure that the conditions of the EUDR are complied with. Companies will still be obliged to carry out due diligence to ensure full compliance.”

Or might they rather just avoid the risk and remove these origins from their sourcing portfolio?

So where is forest?

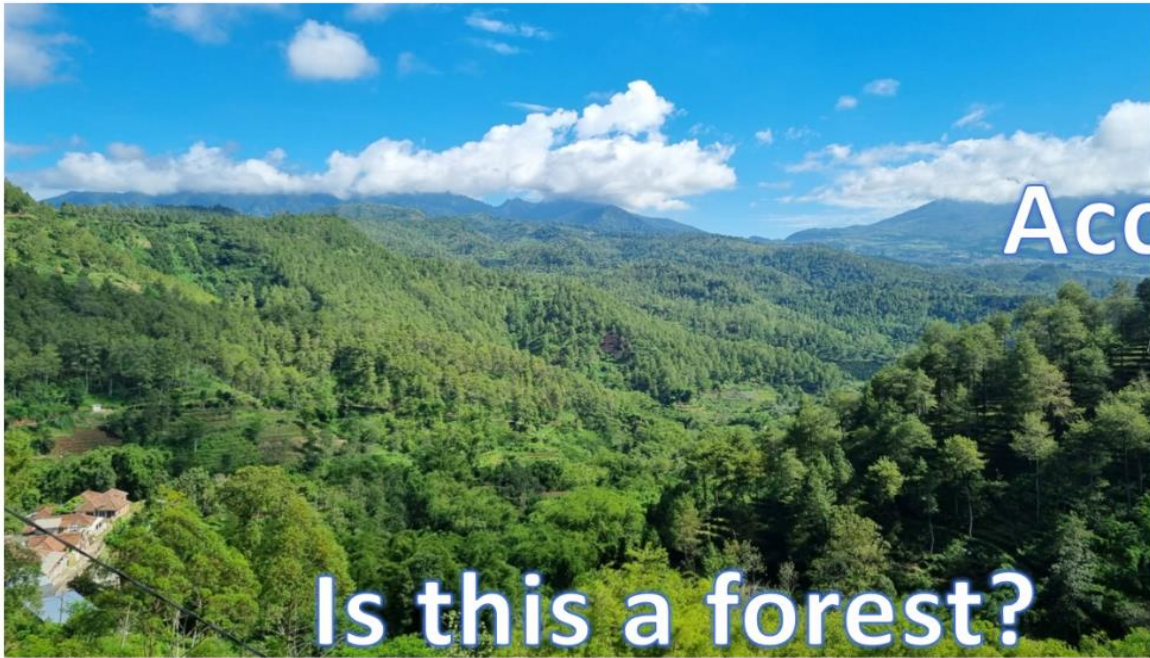
Forest definition in the map:

Land spanning more than 0,5 hectares with trees higher than 5 metres and a canopy cover of more than 10 %, or trees able to reach those thresholds in situ

Something missing?

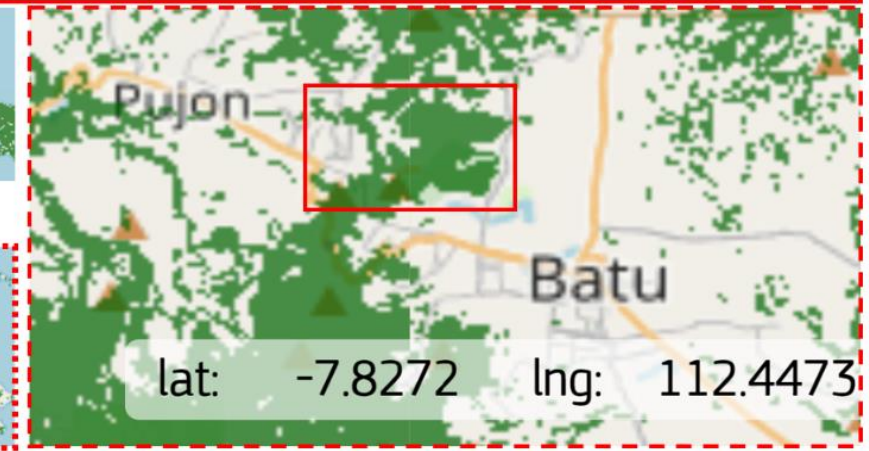
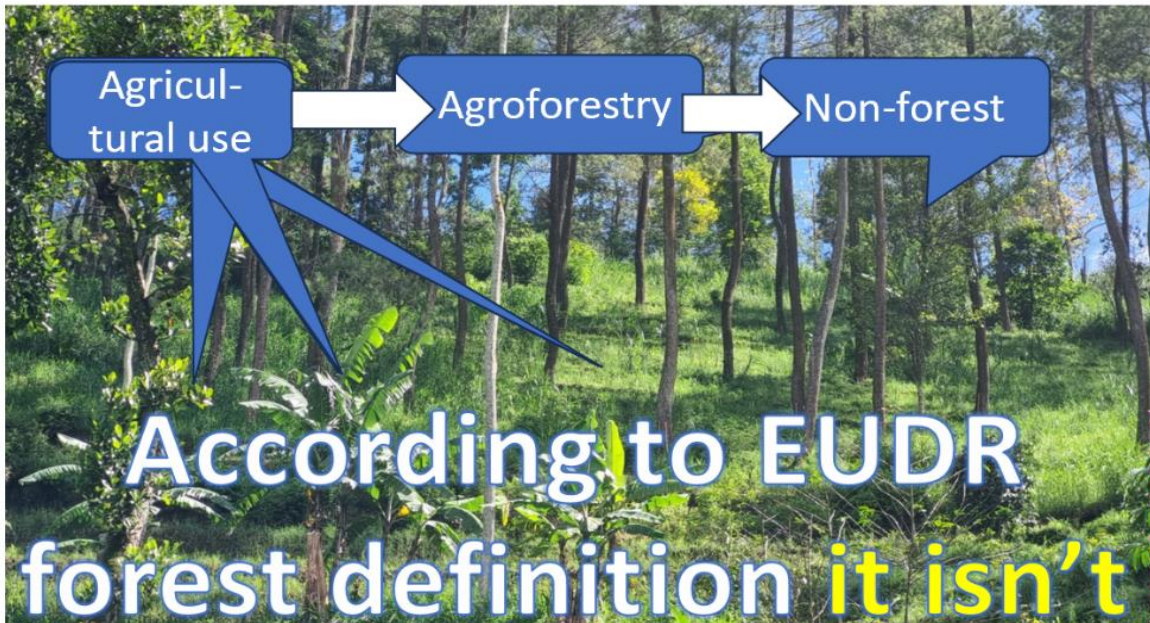
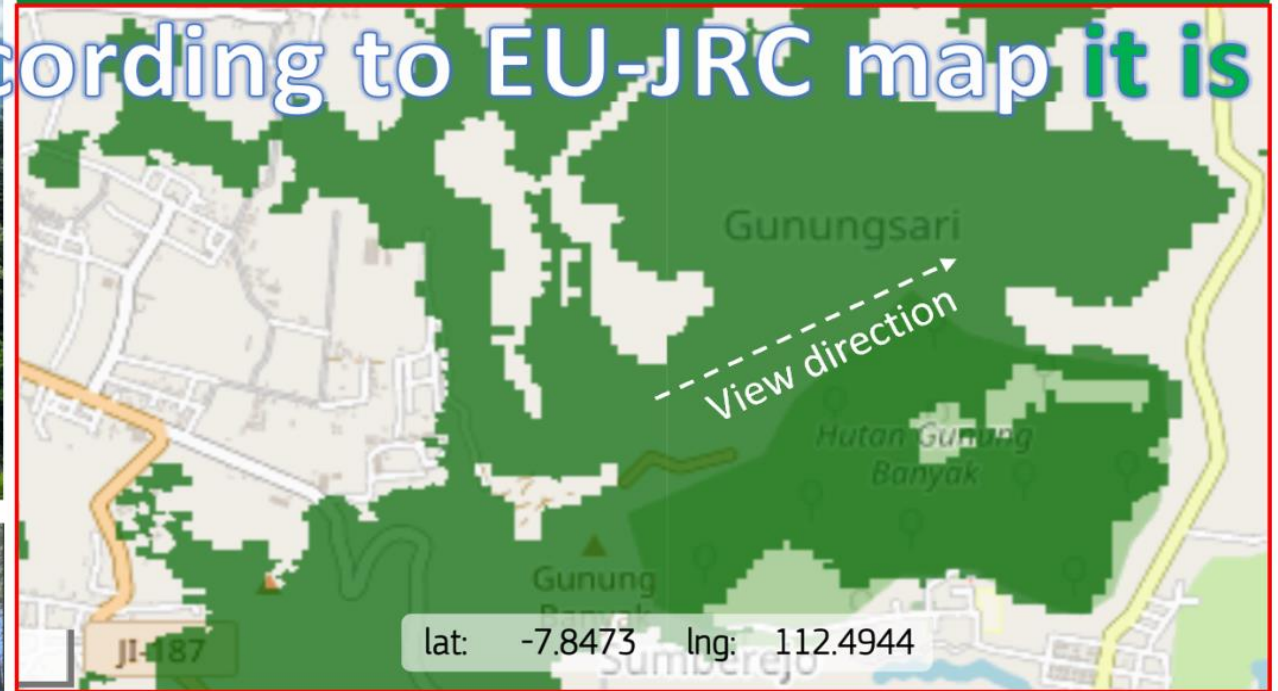


JRC global Forest Cover map <https://forest-observatory.ec.europa.eu/forest/gfc2020>



<https://forest-observatory.ec.europa.eu/forest/gfc2020>
 Global map of Forest Cover for year 2020

According to EU-JRC map it is



Monitoring AF systems

- Remote sensing systems struggle with agroforestry systems
- As the trees are bigger than 5m they are likely to appear in forest and tree cover maps
- Deforestation in cocoa is a slow process which is not always driven by cocoa
- Cocoa can only be detected some years after planting (esp under trees)



What does it mean for smallholder cocoa farmers?

- Agroforestry a challenge leading to false positives.
 - => Risking to penalize recommended agricultural practice.
- Farmers can be excluded from supply chains even if they have not cut any forest after 31 December 2020
 - Because their farm overlaps with Forest in the JRC map and buyer wants to avoid the risk
 - Because evidence of agricultural use (e.g. cocoa being sourced) means it is not forest and so the areas was “deforested”
 - Because they have removed trees from their farm (may be detected as forest loss)

Will the EUDR lead to less deforestation (in cocoa)?

EU assumptions on how/why it will:

- EU is the largest market for cocoa... OK.
- Non-compliant products will yield lower prices on non-EU markets.....?
-

Circumvention and leakage highly likely

+ Effect on companies who are already making efforts (before the EUDR) to improve sustainability?

Solutions?

Production side:

Maintain/ increase productivity on existing cocoa land

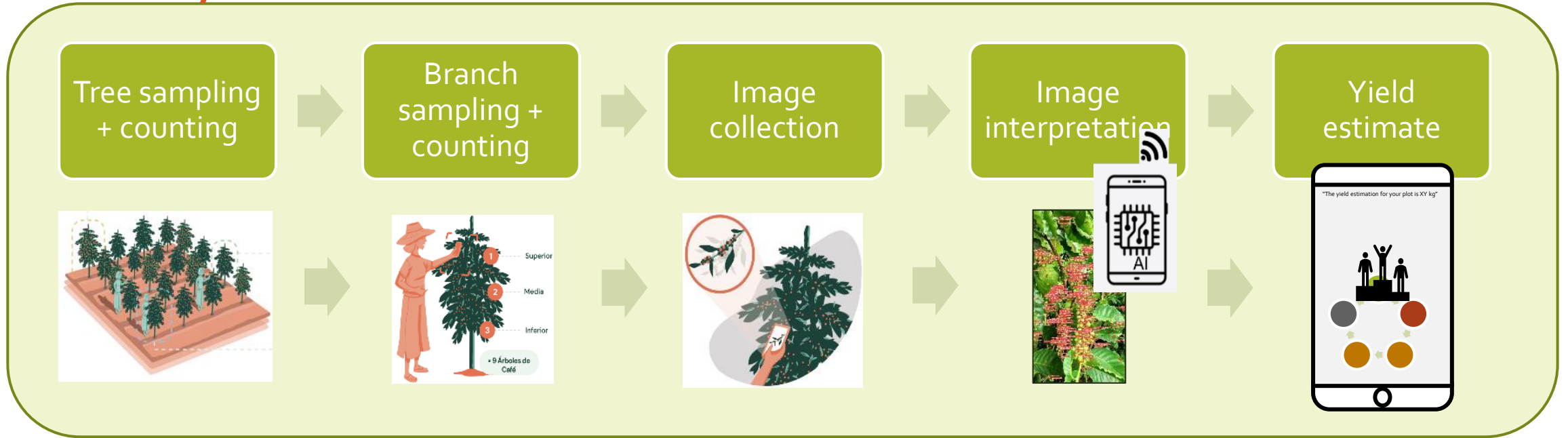
Monitoring:

- Better cocoa (and other commodity) maps
- Jurisdictional approach
- Grievance system
- Focus on supporting “doing better” (forest protection and management) rather than blame shifting, assuming fraud and trying to keep it out of EU boundaries.
- Better systems to prove origin of volumes, geolocalised and time stamped

Article 10 Risk assessment

1. Operators shall verify and analyse the information collected [...]. On the basis of that information and documentation, the operators shall carry out a risk assessment.
 - Product
 - Quantity
 - Country
 - Geolocalization
 - Intermediaries
 - Verifiable information that the relevant products are deforestation-free
2. The risk assessment shall take into account, in particular:
 - a. Risk level
 - b. Presence of forests
 - c-e. Presence of indigenous population
 - f. Deforestation prevalence
 - g. Information sources
 - h. Corruption level
 - i. Supply chain complexity
 - j. *the risk of circumvention of this Regulation or of mixing with relevant products of unknown origin or produced in areas where deforestation or forest degradation has occurred or is occurring;*
 - k-m. Other information
 - n. Certification and other verification systems

Coffee yield estimates with AI machine vision



Remote



Transferable



Georeferenced
information



50% faster

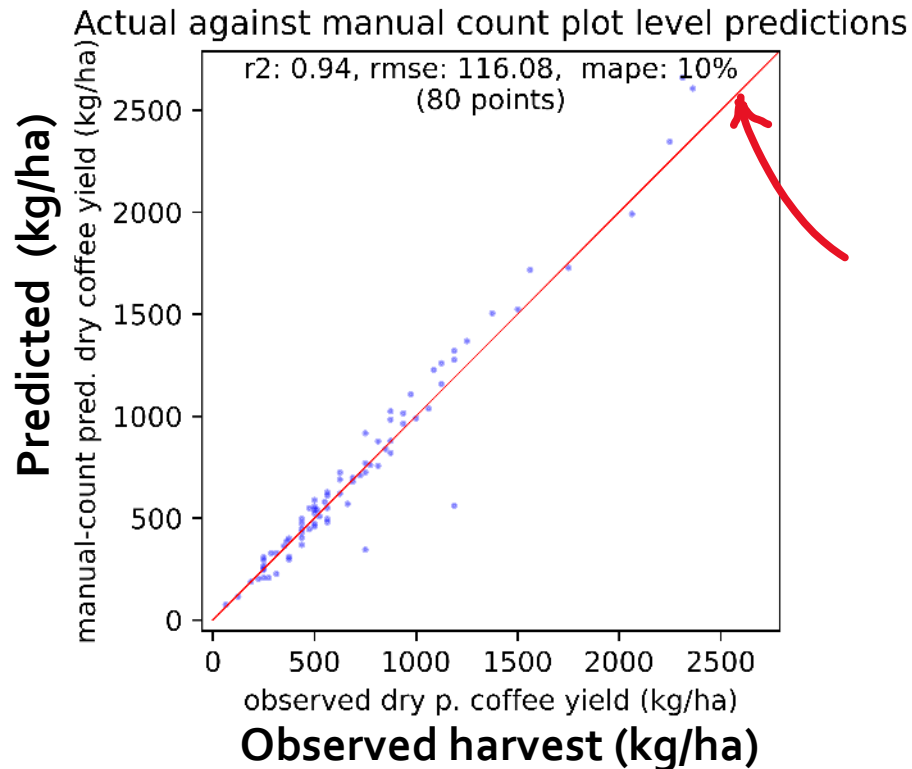


Digital
evidence

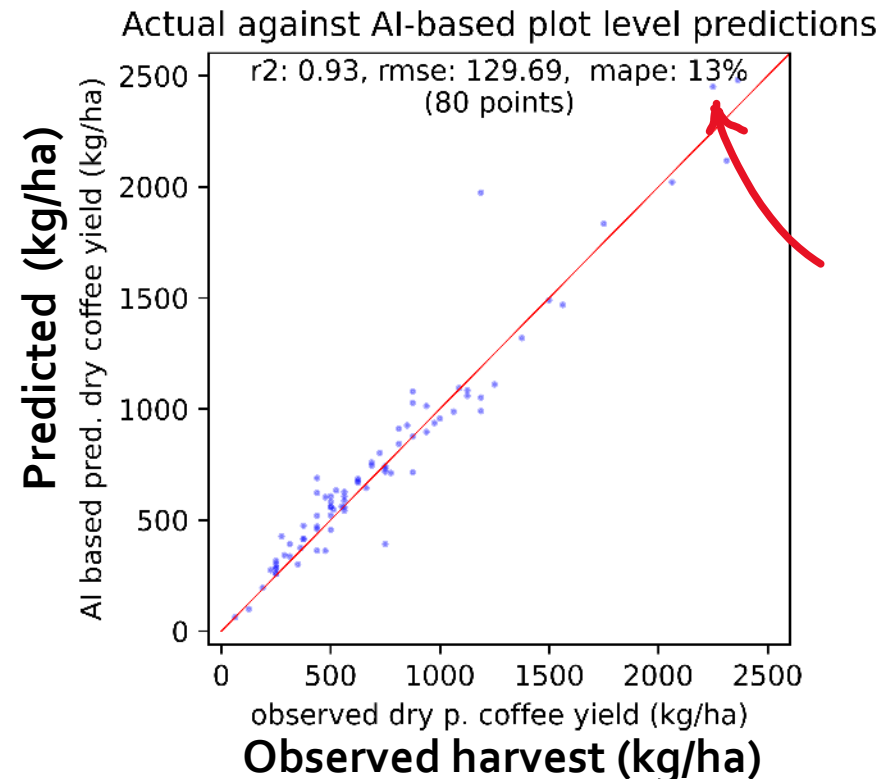
AI estimate accuracy: predicted vs harvested quantity

- Main coffee harvest in Génova, Caldas, Colombia (2023) ; 80 plots,
- Complicated terrain, steep slope
- Technified production systems

Manual count



AI estimation



Accuracy comparable to conventional methods but 50% faster !!

Cocoa yield estimates for monitoring

Established practice

- Manual pod counts
- Sampling of trees, branches or nodes

Requirements

- Travel time
- Trained personnel
- Fatigue problems

Digital applications

Prove origin of volumes, geolocalised and time stamped

Applications:

- Due diligence EUDR
- Certification (FT, RA)
- Resource allocation

Thank you!



UN  WCMC
environment
programme



Alliance

