



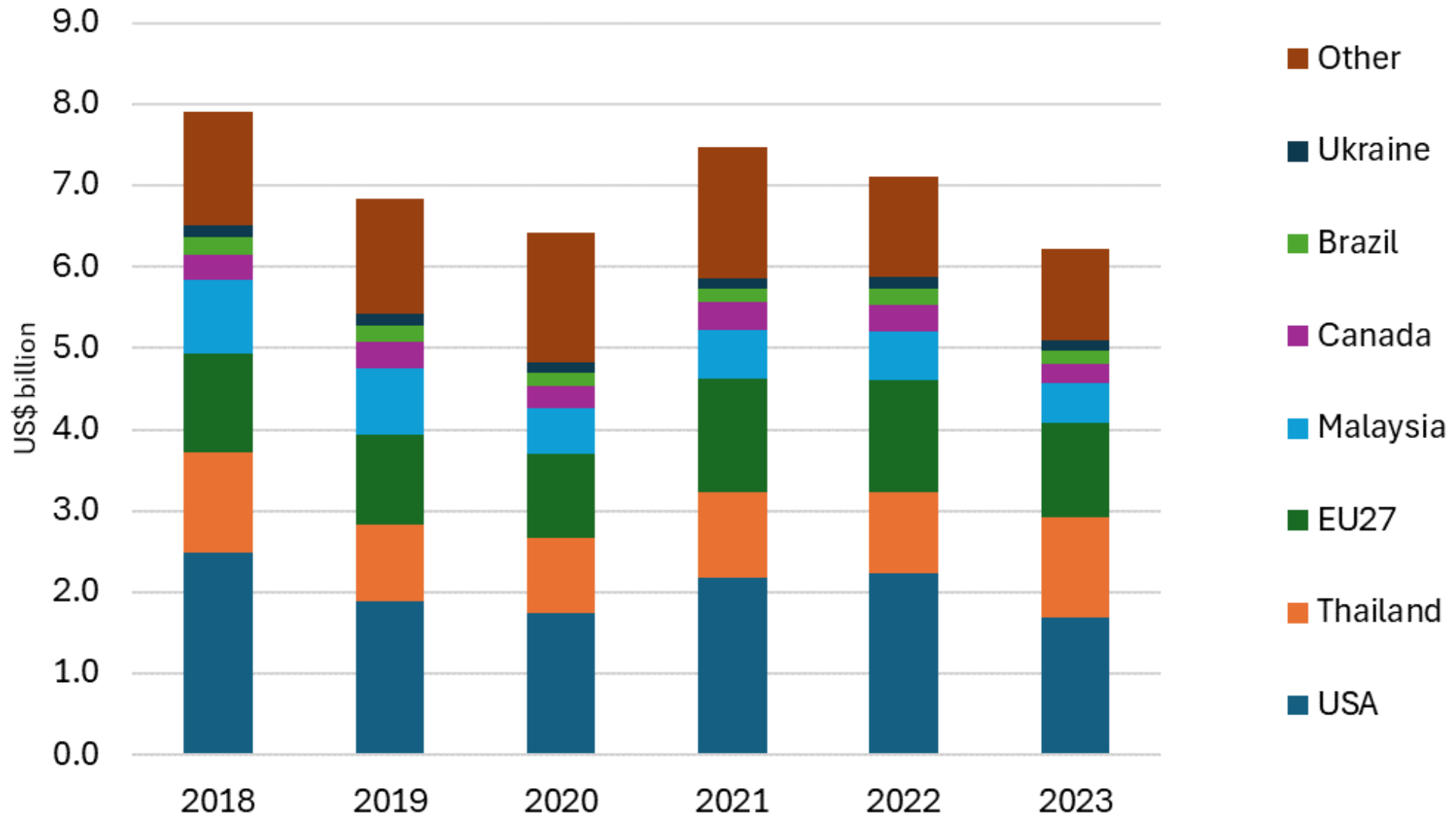
The EUDR: Implications for US Hardwoods

*Michael Snow, Executive Director
American Hardwood Export Council*

July 2024



US is the world's largest hardwood lumber exporter by value

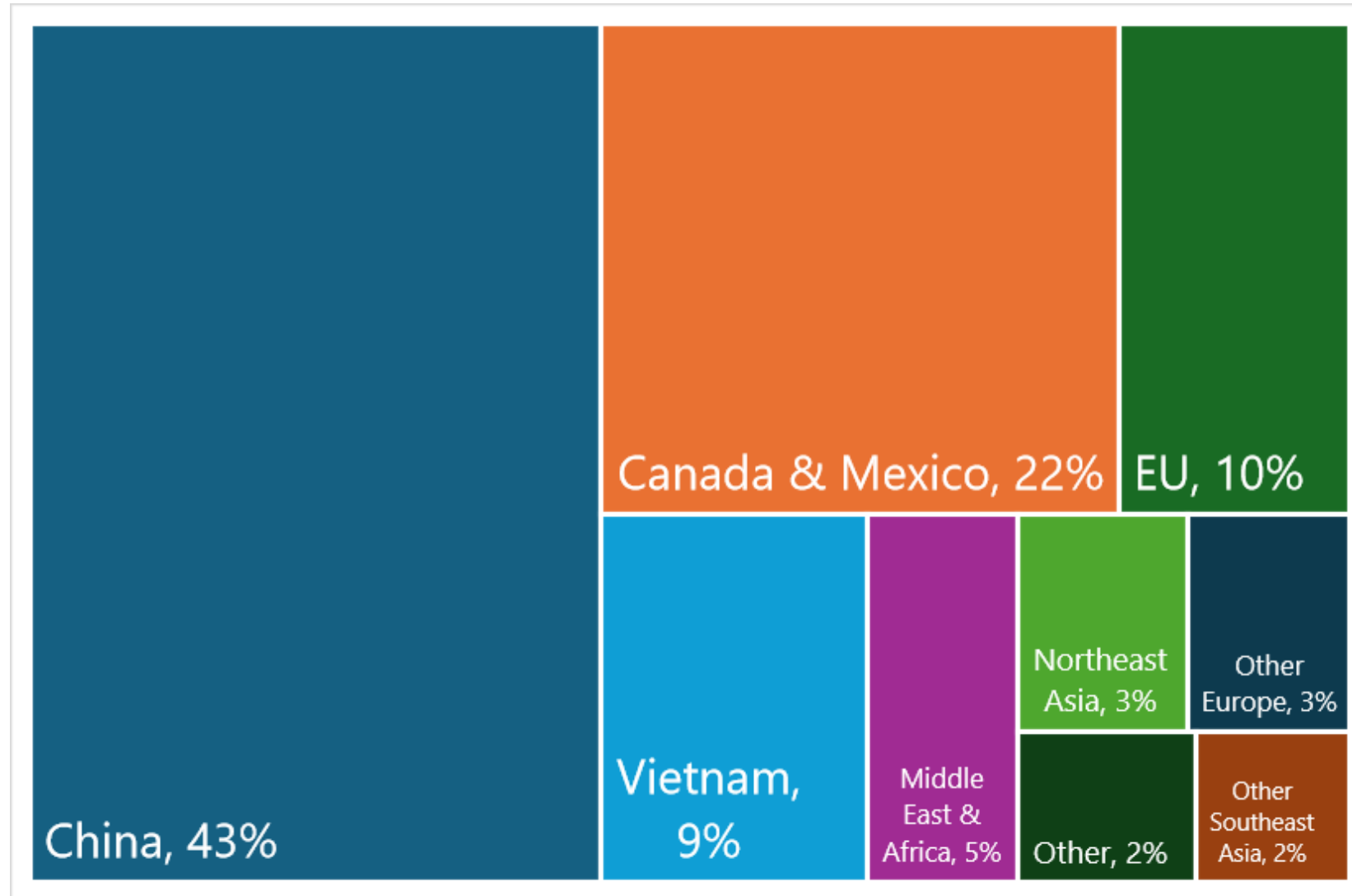


Source: Trade Data Monitor



US hardwood log, lumber & veneer exports by market (US\$ 2023)

Total value
in 2023:
\$2,735
million



Source: USDA GATS



Scope of EUTR vs EUDR

	EUTR	EUDR
Policy context	FLEGT: tackle illegal logging, promote good forest governance	EU Green Deal: reduce embodied carbon in imports, de-risk supply chains
Products	Timber	Timber, cattle, cocoa, coffee, oil palm, rubber, soya
Prohibitions	Illegally harvested	Illegally harvested, contrary to laws covering labour, human & indigenous rights, deforested, degraded
Operator obligations	Due diligence system (DDS) maintained	DDS maintained & DD statement submitted with each consignment before it is placed on, or exported from, the EU market
Traceability	To country of harvest and, beyond that, to the extent necessary to demonstrate negligible risk	Geolocation of "plot of land(s)" where harvesting took place with each consignment irrespective of risk

Information that must be gathered by EU operators

EUTR	EUDR
<p>Must include:</p> <ul style="list-style-type: none">• the description and quantity of the products• the names and contact details of both the supplier and client• the country/region/ concession of harvest depending on assessed risk• evidence of legal compliance	<p>Must include in addition to the EUTR requirement:</p> <ul style="list-style-type: none">• evidence of no deforestation or forest degradation• the geolocation of production plots of land and the dates/periods of production <p>Geolocation: described by GPS coordinates - single set if plot <4 has, polygon if plot >4 has</p> <p>Plot of land: "within a single real-estate property"</p>

EU Deforestation Regulation (EUDR)



The good

- Recognises agriculture not forestry as main deforestation driver
- Recognises carbon benefits of hardwoods from managed natural forest
- Encourages innovative approaches to verification



The bad

- Requirement for geolocation to individual 'plot of land' with each consignment
- Discriminate against smallholders and added value products
- Unrealistic timescale
- Over-optimistic about regulatory & technical capacity to deliver



The ugly

- Lack of consultation with trade partners & industry
- Prohibits products from both legal and illegal deforestation - cuts across sovereignty
- EC to categorise countries as 'high', 'standard' and 'low risk'



The EU Deforestation Regulation (EUDR):

Information for suppliers who want to export timber and timber products to the EU

Berlin, 10.06.2024

1. Tree species (scientific name)
2. Country of harvest
3. Geo-coordinates of all plots of land where the wood was harvested
4. Date or time range of harvest
5. Evidence that the wood was legally harvested
6. Evidence that the wood is deforestation-free



Definitions

- **"Deforestation-free" means:**
 - a) products sourced from land not subject to deforestation after 31 Dec 2020; and
 - b) for timber, products harvested without inducing forest degradation after 31 Dec 2020.
- **"Deforestation" means (from FAO):**
 - conversion of forest to agricultural use, whether human induced or not
 - conversion for property or infrastructure development, mining etc is excluded
- **"Forest degradation" means (no internationally agreed definition):**
 - structural changes to the forest cover, taking the form of a conversion of primary forests or naturally regenerated forests into plantation forests or other wooded lands.
 - other changes in species composition, "high grading" etc is excluded



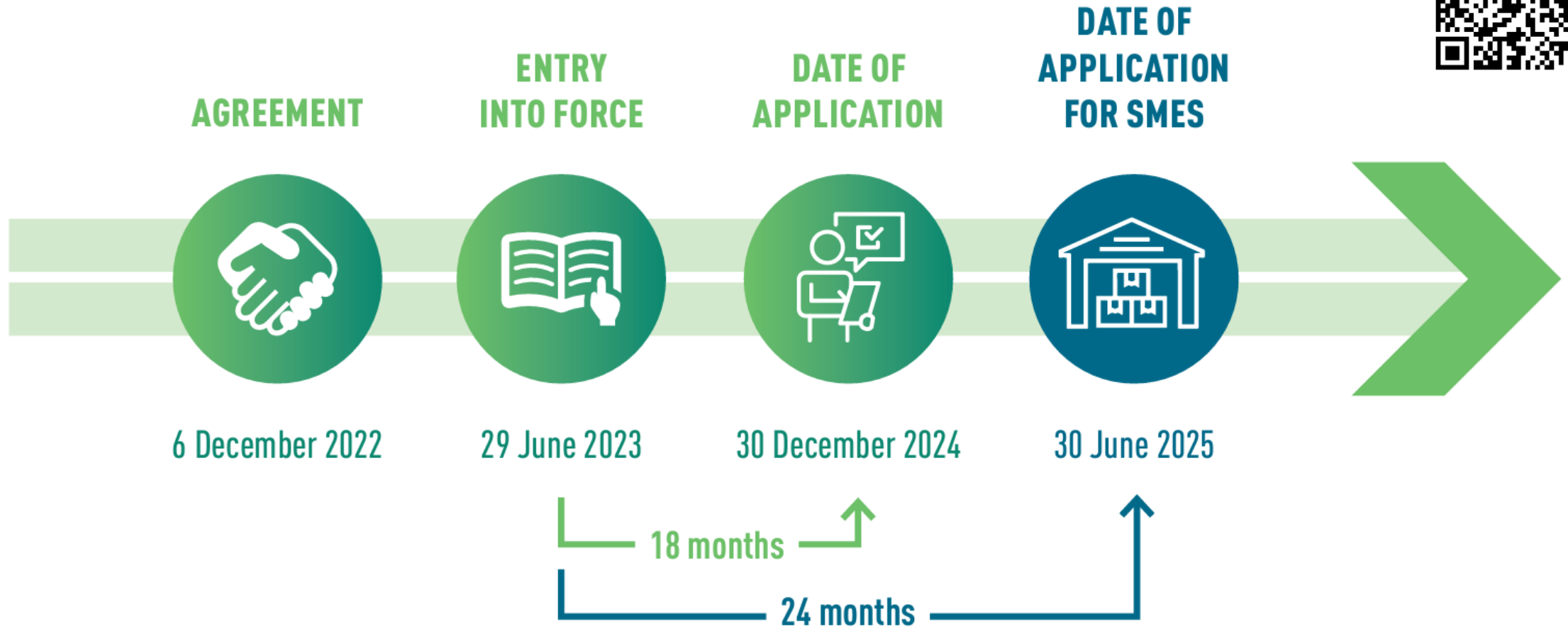
What does 'geolocation' mean?

- *'geolocation' means the geographical location of a plot of land described by means of latitude and longitude coordinates corresponding to at least one latitude and longitude point and using at least **six decimal digits**.*
 - *For relevant commodities other than cattle, for plots of land of more than 4 hectares, the geographical location shall be provided using polygons, meaning sufficient latitude and longitude points to describe the perimeter of each plot of land*
- All geographical locations of production for covered commodities in a shipment must be provided to the FII Information System

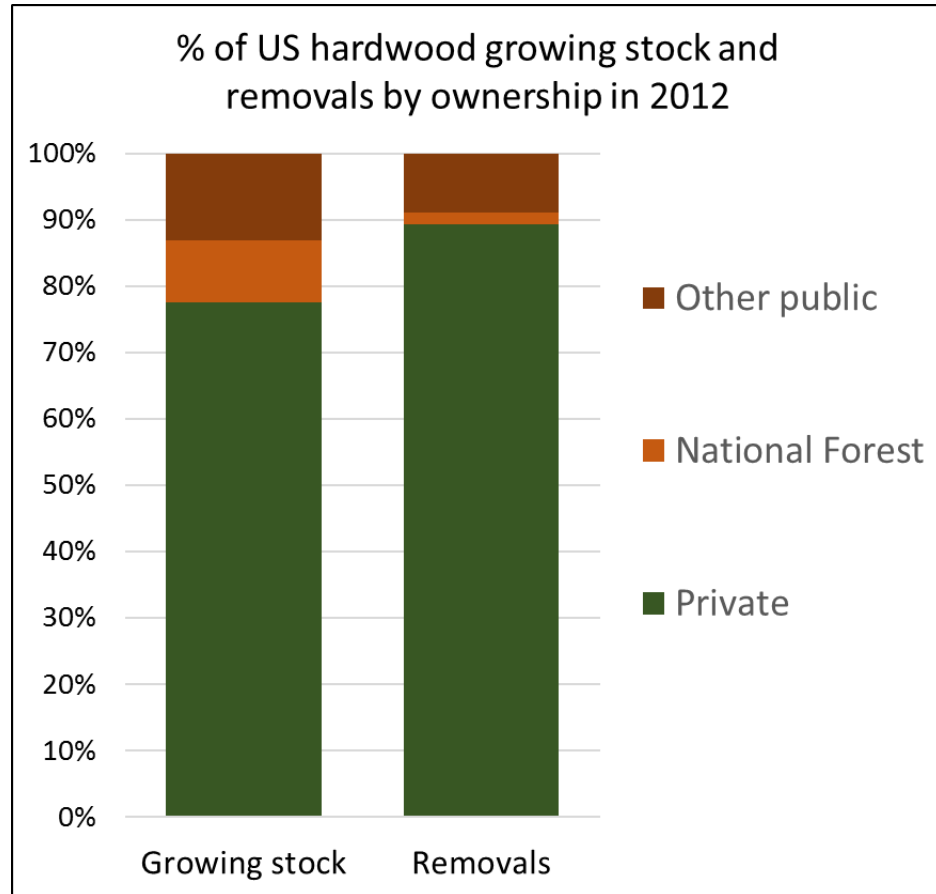


EUDR Timeline

Source:
ATIBT



Private forest ownership in the Eastern United States in 2019.



	No. of owners	Area		Average area of ownership	
		1000	M. acres	M. has	acres
Family	9254	247	100	27	11
Other non-industrial	449	96	39	213	86
Industrial	56	18	7	328	133
Total	9759	361	146	37	15

Source: USDA Forest Inventory Analysis Program



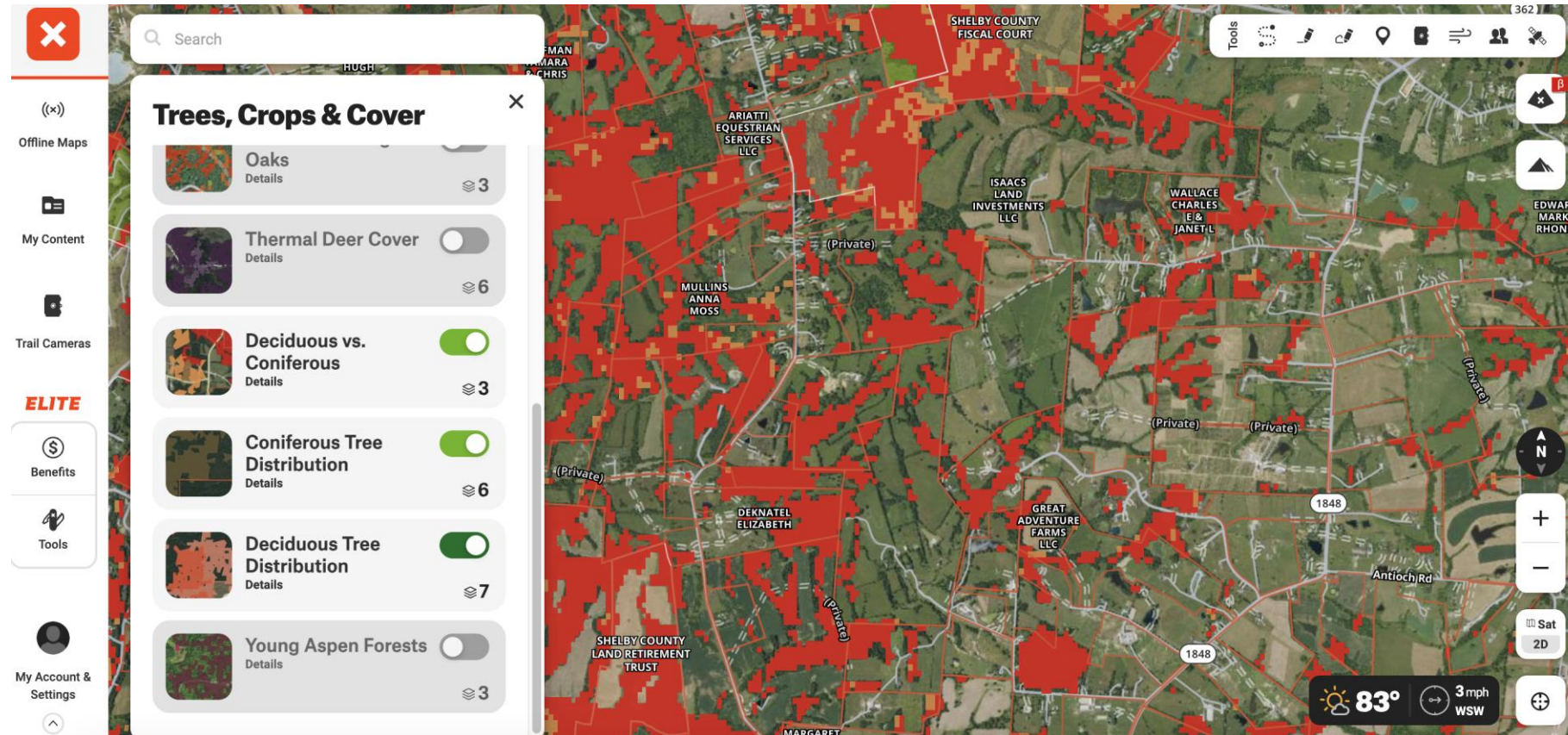
Diverse semi-natural forest, fragmented ownership, complex supply networks

- Over 90% of American hardwood logs from private landowners
- 9.4 million small family forest owners, average holding < 10 hectares
- USDA National Woodland Owner Survey: 22% identify 'Timber' as a reason for owning forest
- Low intensity selection felling of diverse natural forest
- Each harvest comprises small quantities of each species in variable grades
- Sawmills source from 100s of landowners within 25-100 mile radius each year
- Supplying consignments of specific species, grade, size, & color requires aggregating and mixing from numerous small harvest sites across numerous ownerships over a period of time



EUDR conformance framework for U.S. hardwoods

- *U.S. is almost unique in having digital access to nationwide and regularly updated property boundary data, remote sensing data, and vast quantities of publicly available contextual data*
- *Latest AI techniques allow for cost-effective collection, combination and analysis of a vast array of data*

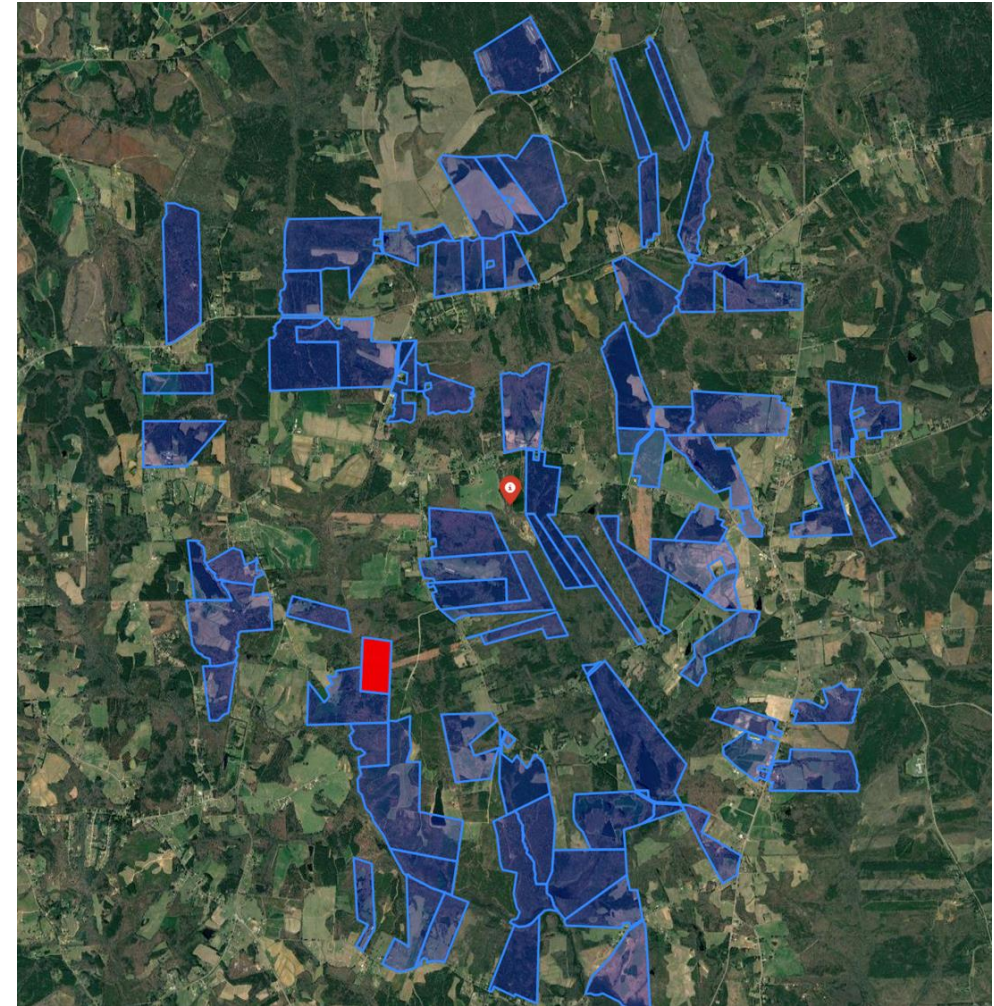


onX Hunt App www.onxmaps.com



EUDR conformance framework for U.S. hardwoods

- The system will enable all containers of U.S. hardwood arriving in the EU to be accompanied by the documentation required to demonstrate legal and deforestation-free origin, including geolocation data at the county level.
- The system comprises the following components:
 - an annually updated database identifying to an unprecedented level of accuracy all harvesting operations in U.S. hardwood forests which are not “deforestation-free” according to EUDR definitions.
 - independent third-party assessments of the risk of illegal harvesting in each of the 33 U.S. hardwood producing states.
 - an on-line application to make this data freely accessible to U.S. hardwood mills and other operators engaged in the export trade.
 - an SHC chain of custody (CoC) standard for hardwood mills and downstream distributors, exporters, and manufacturers to ensure that the legal and deforestation-free claim is applied only to verified U.S. hardwood.



Property-level deforestation detection system: Georgia pilot

Georgia Growth & Removals, Forest Land, 2021

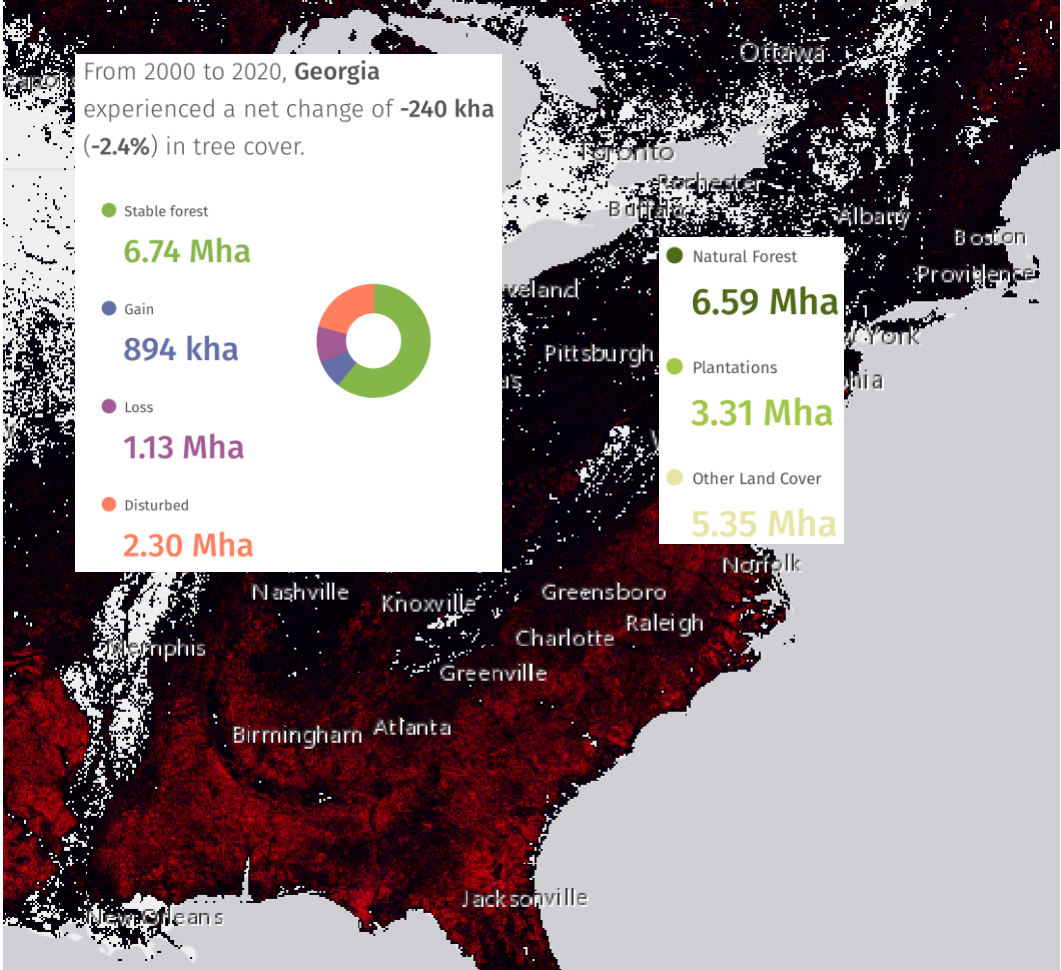
million m3	Growth	Removals	G/R Ratio
Total	60.5	40.0	1.5
Softwoods	42.4	32.0	1.3
Hardwoods	18.0	8.0	2.3

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Georgia Land & Water, 2021

1000 hectares	2020	2021	Change
Total area	15,391	15,391	0
Forest Land area	9,875	9,851	-24
Timberland area	9,636	9,613	-24
Timberland (private)	8,754	8,728	-26
Timberland private %	91%	91%	...

Source: USDA Forest Inventory Analysis Program



Global Forest Watch Tree Cover Loss data



Property-level deforestation detection system: analytical steps

Step 1: acquire satellite data – European Space Agency Copernicus Sentinel 2 – 10m resolution

Step 2: train system to identify different land use types in US context in line with EUDR definitions – deciduous forest, coniferous forest, plantation, bare land, agricultural crops etc....

Step 3: compare satellite images at specified intervals to detect and date land-use changes

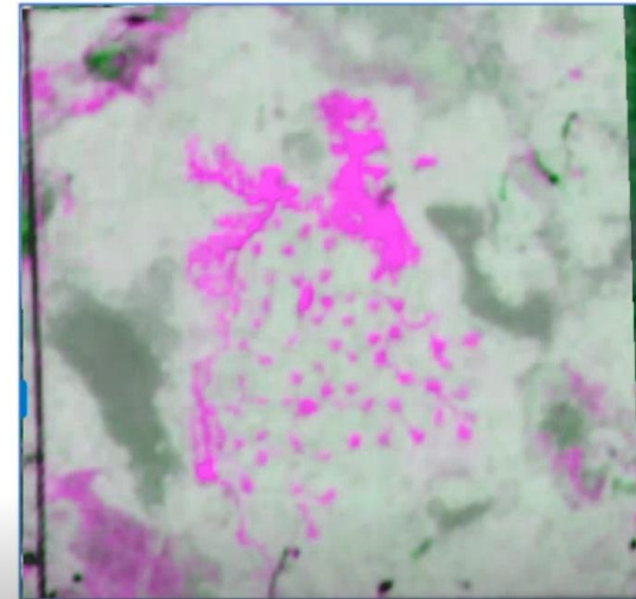
Before Harvest



After Harvest



Change Detection



Step 4: overlay cadastral (property boundary) data to analyse change drivers at property level

Step 5: AI queries data sources to decide on likelihood that each disturbance is deforestation due to agriculture

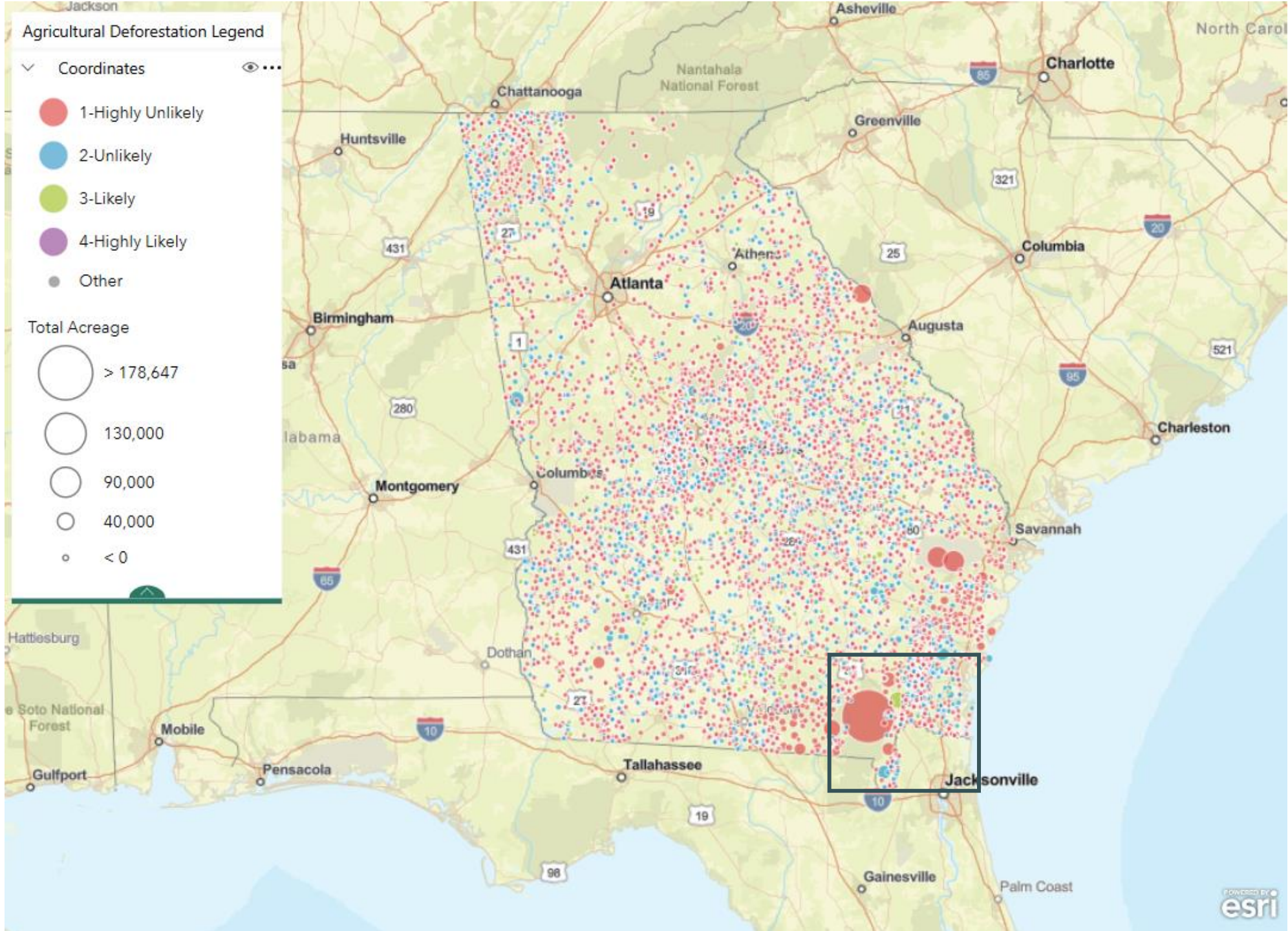
Agricultural Deforestation Legend

Coordinates

- 1-Highly Unlikely
- 2-Unlikely
- 3-Likely
- 4-Highly Likely
- Other


Total Acreage

- > 178,647
- 130,000
- 90,000
- 40,000
- < 0








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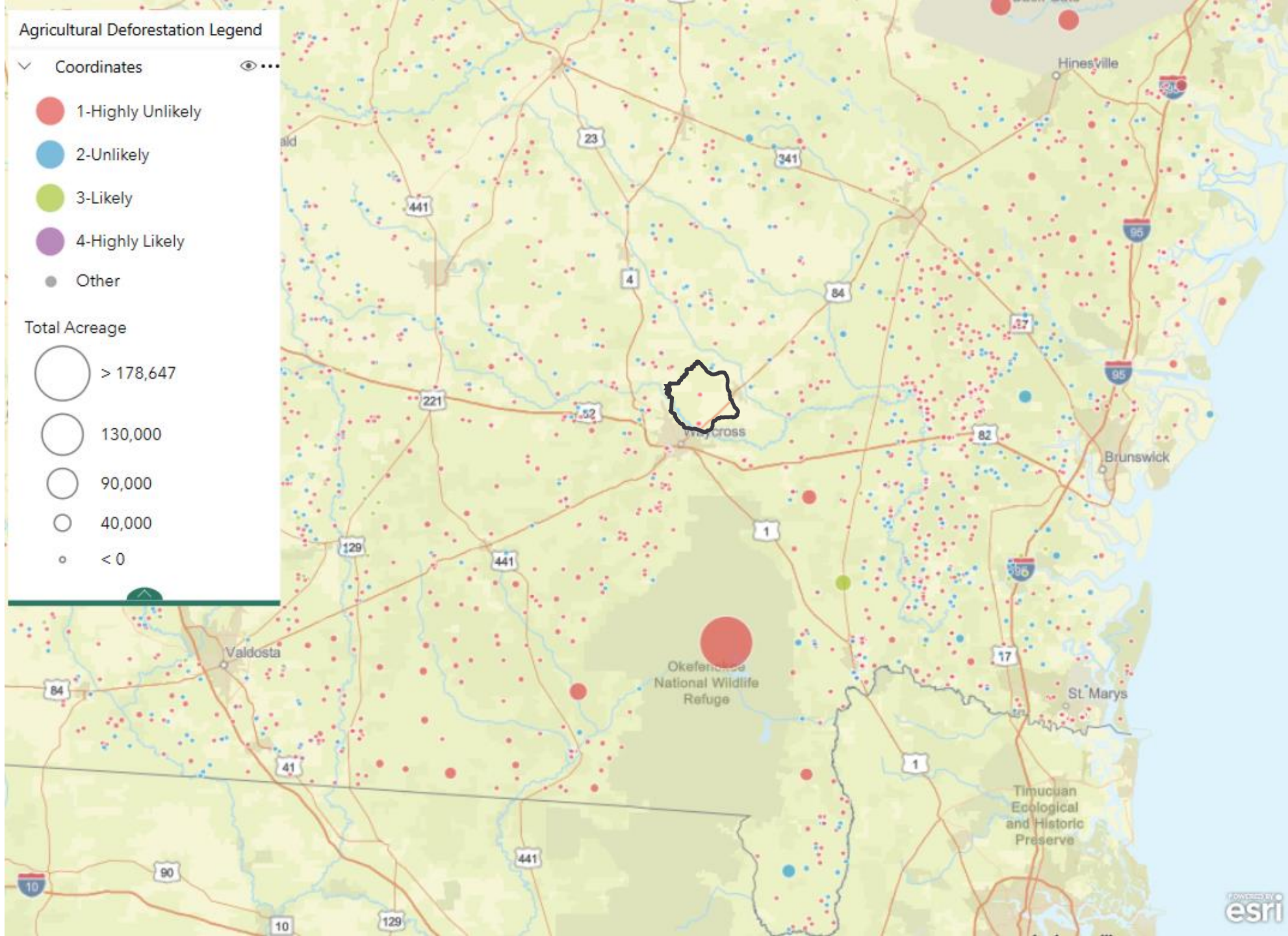
Agricultural Deforestation Legend

Coordinates 

-  1-Highly Unlikely
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Total Acreage

-  > 178,647
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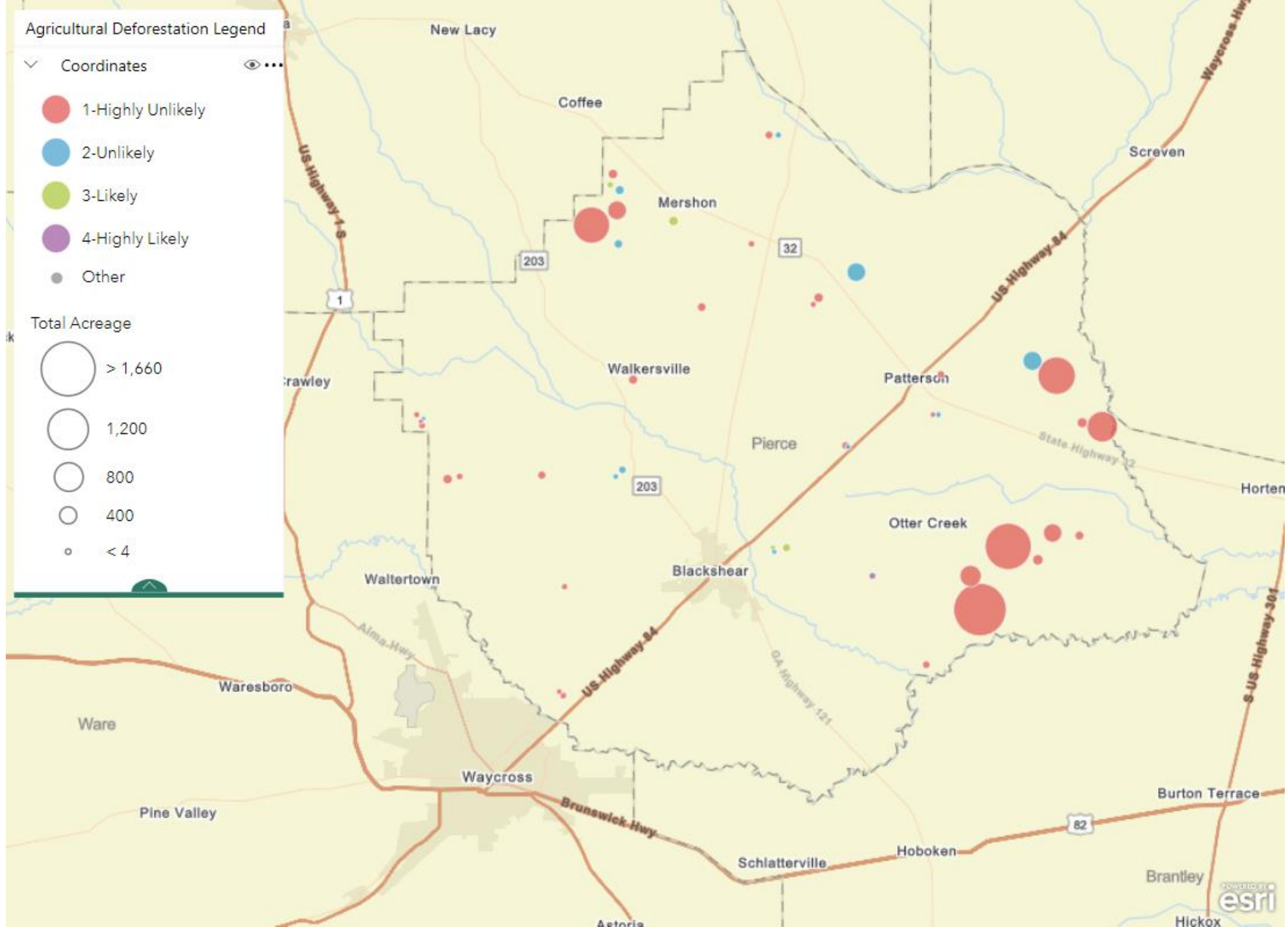
Agricultural Deforestation Legend

Coordinates

- 1-Highly Unlikely
- 2-Unlikely
- 3-Likely
- 4-Highly Likely
- Other

Total Acreage

- > 1,660
- 1,200
- 800
- 400
- < 4



State GA

County Pierce

Zip Code All

Key Data Points Collected Supporting Deforestation Cause Decision Making

Vidalia Onion Grower Parcel	GA Wood Parcel	GA Forest Area Parcel	National Forest Parcel	Crop Layer Classification Type	Use Case Mapping	Parcel Function	Industry Classification	Deforestation Due to Agriculture	Parcel Count
False	False	False	False		Conservation		Land	1-Highly Unlikely	3
False	False	False	False		Conservation	Private household	Land	1-Highly Unlikely	1
False	False	False	False	Crop	Conservation		Agricultural	1-Highly Unlikely	3
False	False	False	False	Crop	Conservation	Cotton crop	Agricultural	1-Highly Unlikely	3
False	False	False	False	Forest			Land	1-Highly Unlikely	6
False	False	False	False	Forest	Conservation		Land	1-Highly Unlikely	11
False	False	False	False	Forest	Conservation	Private household	Land	1-Highly Unlikely	1
False	False	True	False			Private household	Agricultural	1-Highly Unlikely	1
False	False	True	False	Crop	Conservation		Agricultural	1-Highly Unlikely	1
False	False	True	False	Forest	Conservation		Land	1-Highly Unlikely	1
False	False	False	False			Private household	Agricultural	2-Unlikely	2
False	False	False	False		Conservation		Agricultural	2-Unlikely	2
False	False	False	False		Conservation	Private household	Agricultural	2-Unlikely	1
False	False	False	False		Agricultural	Agriculture, forestry, fishi...	Land	2-Unlikely	1
False	False	False	False	Crop	Conservation		Land	2-Unlikely	1
False	False	False	False	Forest	Conservation		Agricultural	2-Unlikely	1
False	False	False	False	Forest	Agricultural	Agriculture, forestry, fishi...	Land	2-Unlikely	3
False	False	False	False		Agricultural	Agriculture, forestry, fishi...	Agricultural	3-Likely	1
False	False	False	False	Forest	Agricultural	Agriculture, forestry, fishi...	Agricultural	3-Likely	3
False	False	False	False	Crop	Agricultural	Agriculture, forestry, fishi...	Agricultural	4-Highly Likely	1
Total									47

- 47 forest disturbances identified from satellite data in Pierce County 2022-2023
- Algorithm queries numerous data layers to decide on likelihood that each disturbance represents deforestation due to agriculture
- Currently uses only data sources readily identifiable during the 4 weeks of the pilot
- Potentially thousands of data sources that can be fed into the system as it develops

Key Decision Making Inputs

Collection Methods:

Structured Reliable Datasets
 State of Georgia - Licensed Vidalia Onion Growers
 Georgia Wood
 Georgia Forest

Geospatial Joins
 Crop Land Data Layer
 National Forest Data Layer

Standardized County Location Data
 Zoning
 Use Case
 Functions
 Owner
 Address
 Mailing Address

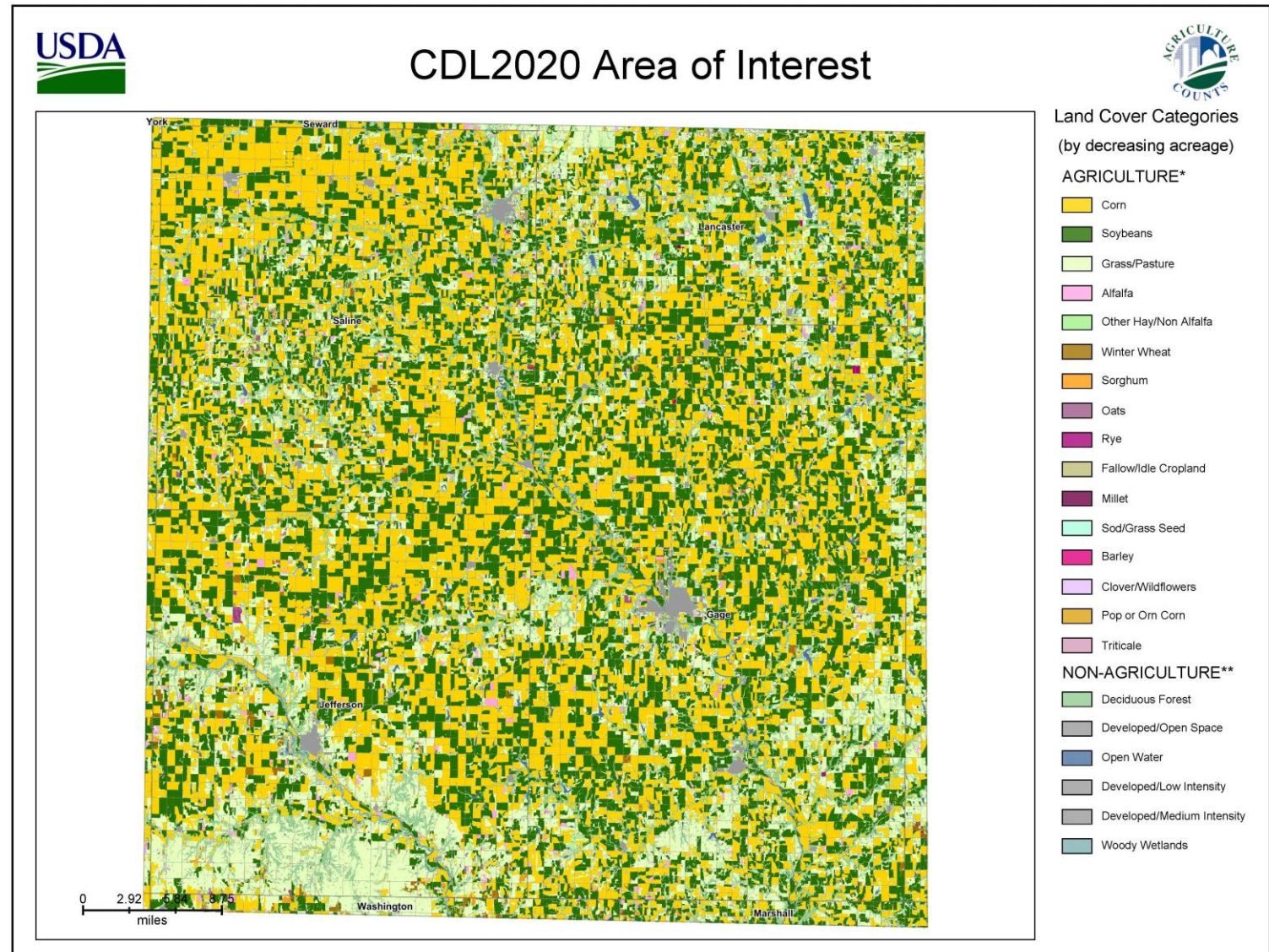
Large Language Model/Machine Learning Models
 Query Determining Industry based on all available data points as an input to an AI engine

Other Potential Data Collection Methods
 Programmatic Web Scraping Methods
 Web Based AI Query with Structured Results

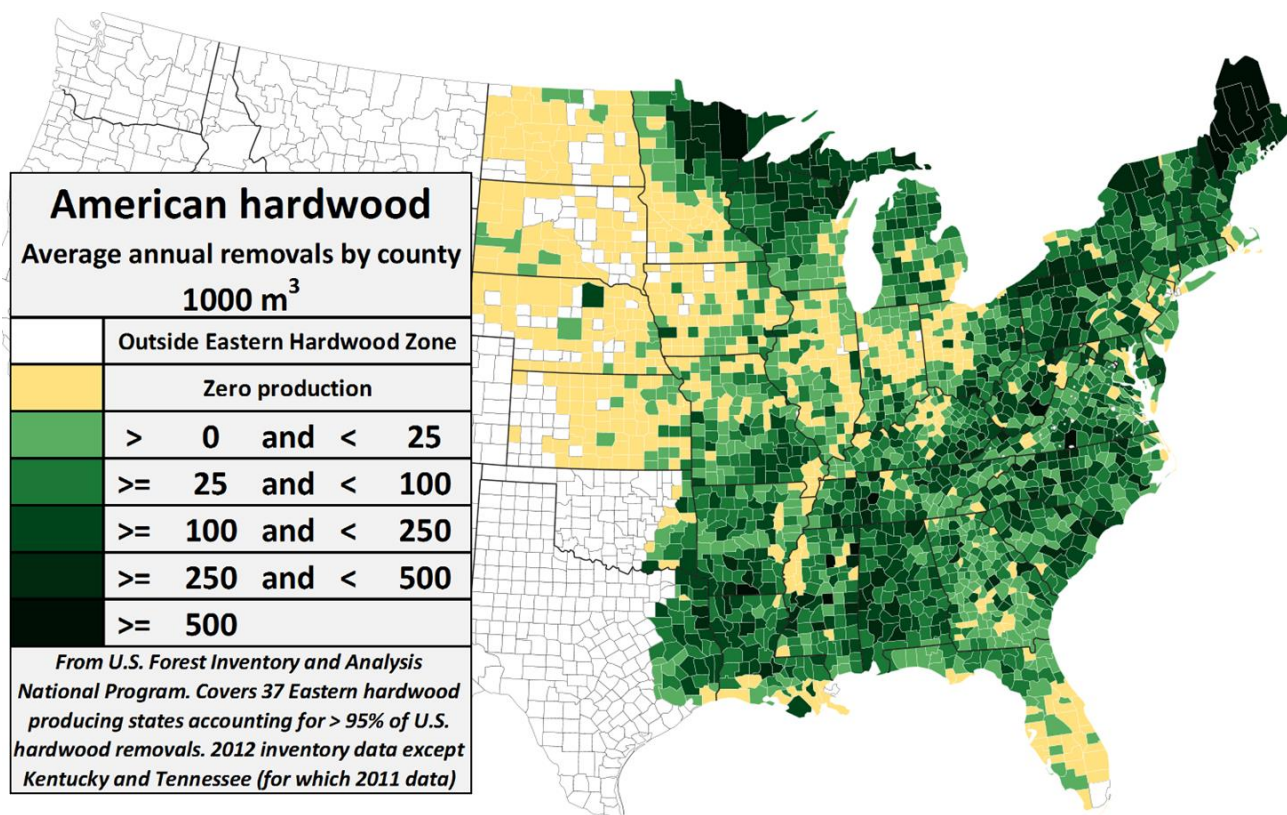


Additional data layer example

- USDA Cropland Data Layer
- Publicly available
- Updated annually
- Produced by combining satellite imagery (30mX30m) with agricultural ground reference data
- Differentiates between specific crop types and broad forest types



The aim is to enable US hardwood exporters to provide with every consignment delivered into the EU the geolocation comprising the polygons of supplying counties & the year of harvest. More equitable for small operators vs large state-owned concessions



County level data is manageable - 1360 counties account for > 99% of hardwood supply (compared to 10 forest owners)

Regular analysis of satellites and other contextual data precisely quantifies deforestation risk at county level

Mills must take mitigation action to avoid sourcing from specific properties where there is EUDR deforestation risk

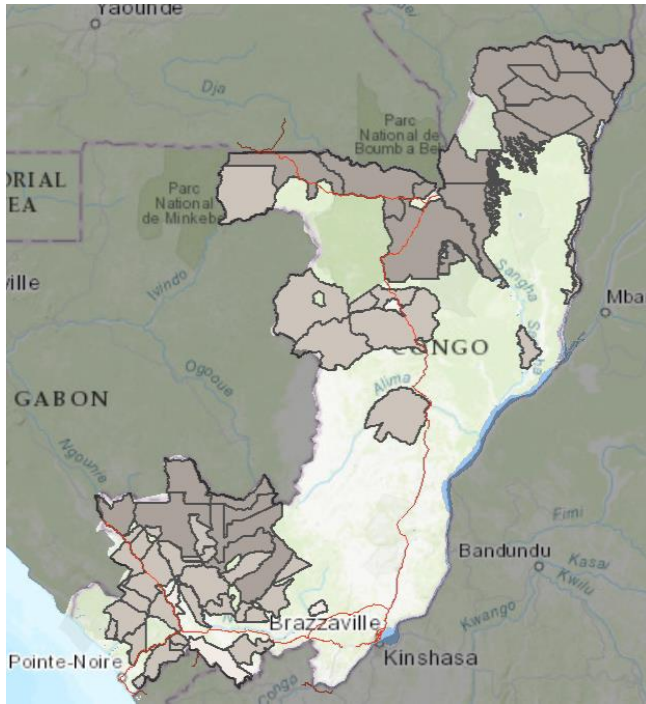
County level geolocations can be verified using plant-chemistry-based provenance technologies

County level geolocation avoids unnecessary costs & burdens on small operators where risks are negligible

Resolves confidentiality and anti-trust issues surrounding provision of data on individual properties



Providing county level geolocation data ensures equity between suppliers from smallholder, industry and state lands



Republic of Congo:
Country area: 34m hectares
State owns all production forest
Concession area: 15m hectares
Number of concessions: 62
Average concession:
240,000 hectares



US counties supplying hardwood average 160,000 hectares area & 100,000 m³ of hardwood log harvest per annum, equivalent to individual state or industry forest holdings in many countries

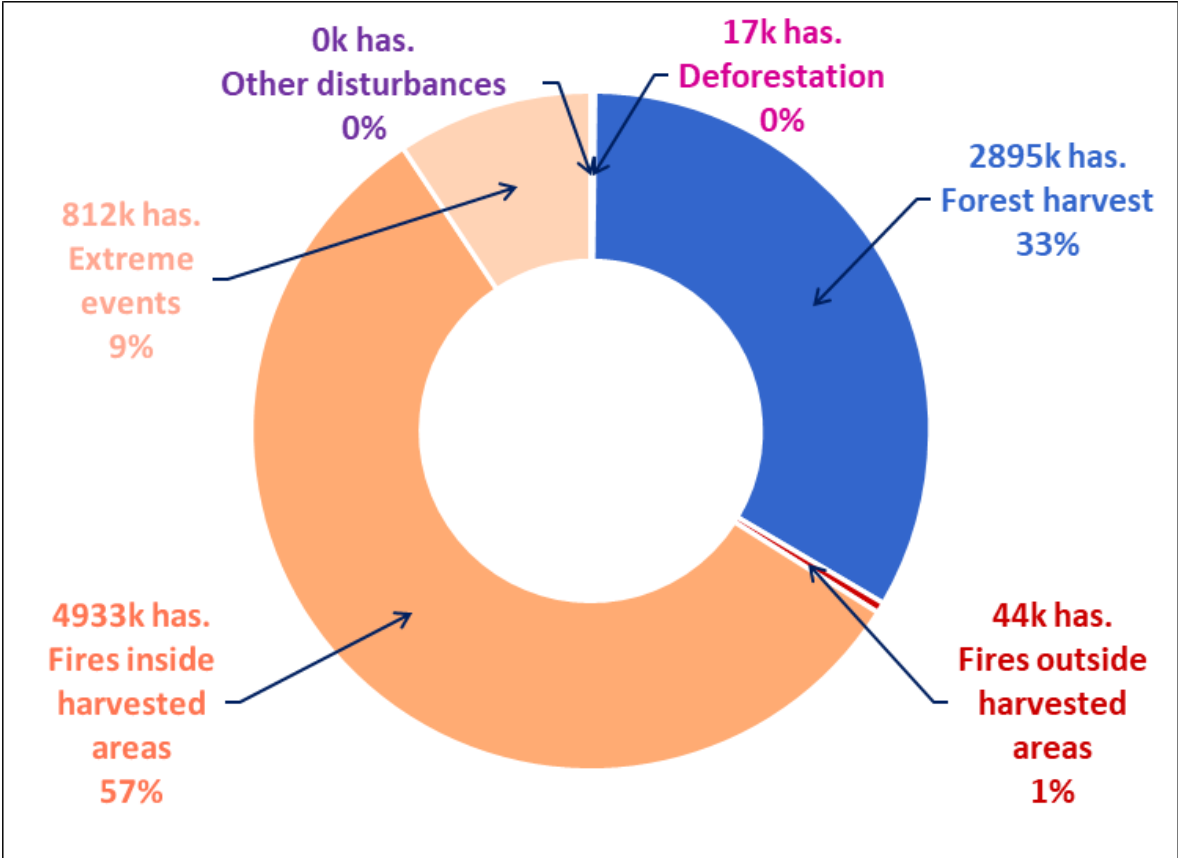


Buckingham County, Local District 7, Virginia, an area of 20k hectares, has more than 1000 real estate properties containing forests

EU Observatory on Deforestation & Forest Degradation, EC Joint Research Centre (JRC)

Data for the United States

U.S. forest disturbance, area by type of disturbance in 2022



U.S. deforestation as % of total disturbance & forest area

Year	Deforestation (1000 hectares)	% of all forest "disturbance"	% US forest area (347 million has)
2016	17.99	0.19%	0.0052%
2017	21.28	0.21%	0.0061%
2018	18.85	0.19%	0.0054%
2019	23.50	0.29%	0.0068%
2020	14.09	0.15%	0.0041%
2021	17.75	0.15%	0.0051%
2022	17.22	0.20%	0.0050%

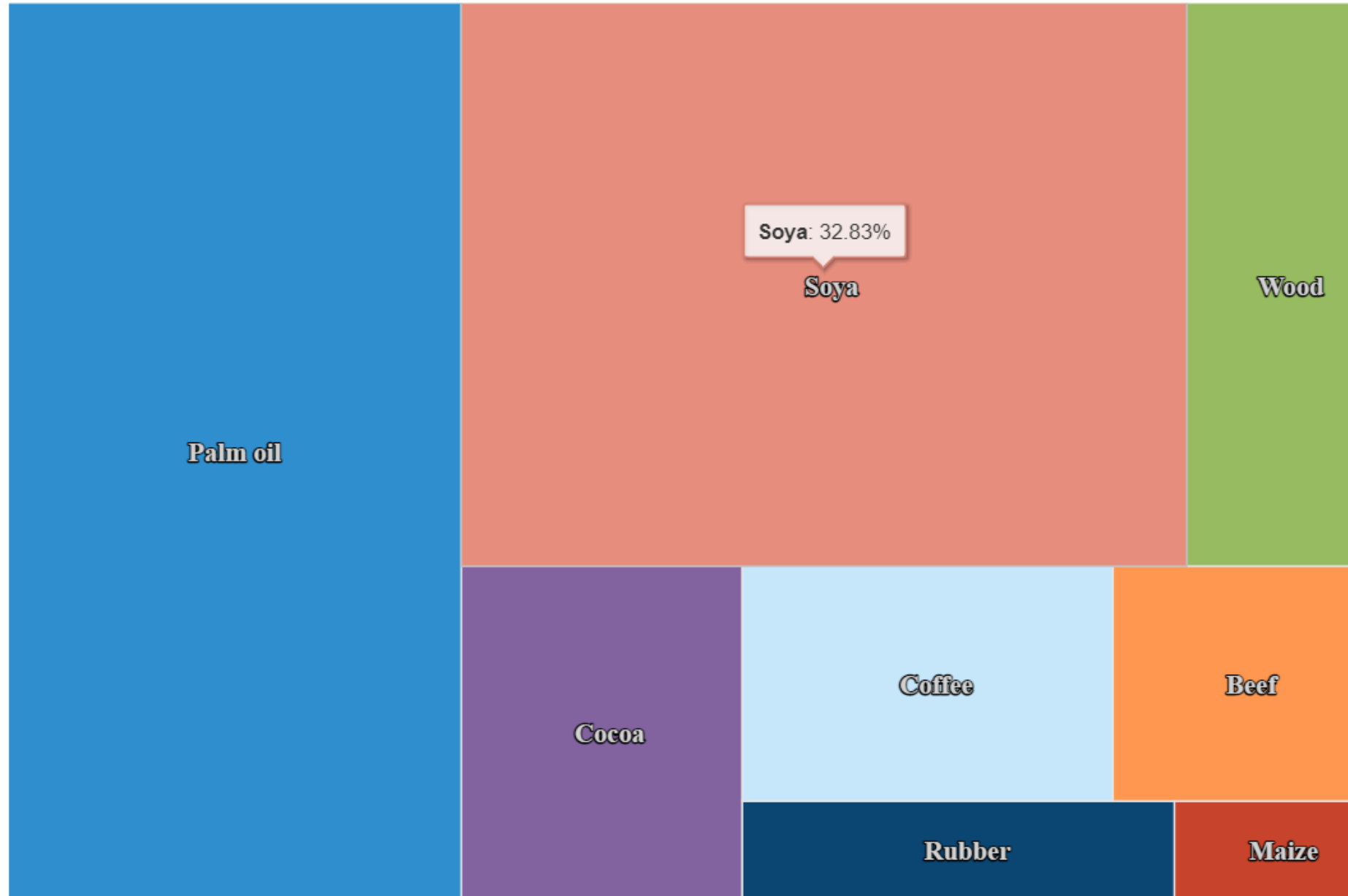
Notes

- Commodity-driven deforestation risk is effectively zero for all US origin forest products
- “Forest harvest” disturbance data is for “clear-cut harvesting” concentrated in softwood forests and are areas that will be reforested
- Most hardwood is selection harvested for which disturbance is so minimal as to be undetectable by 30x30m resolution Landsat images used by EC JRC



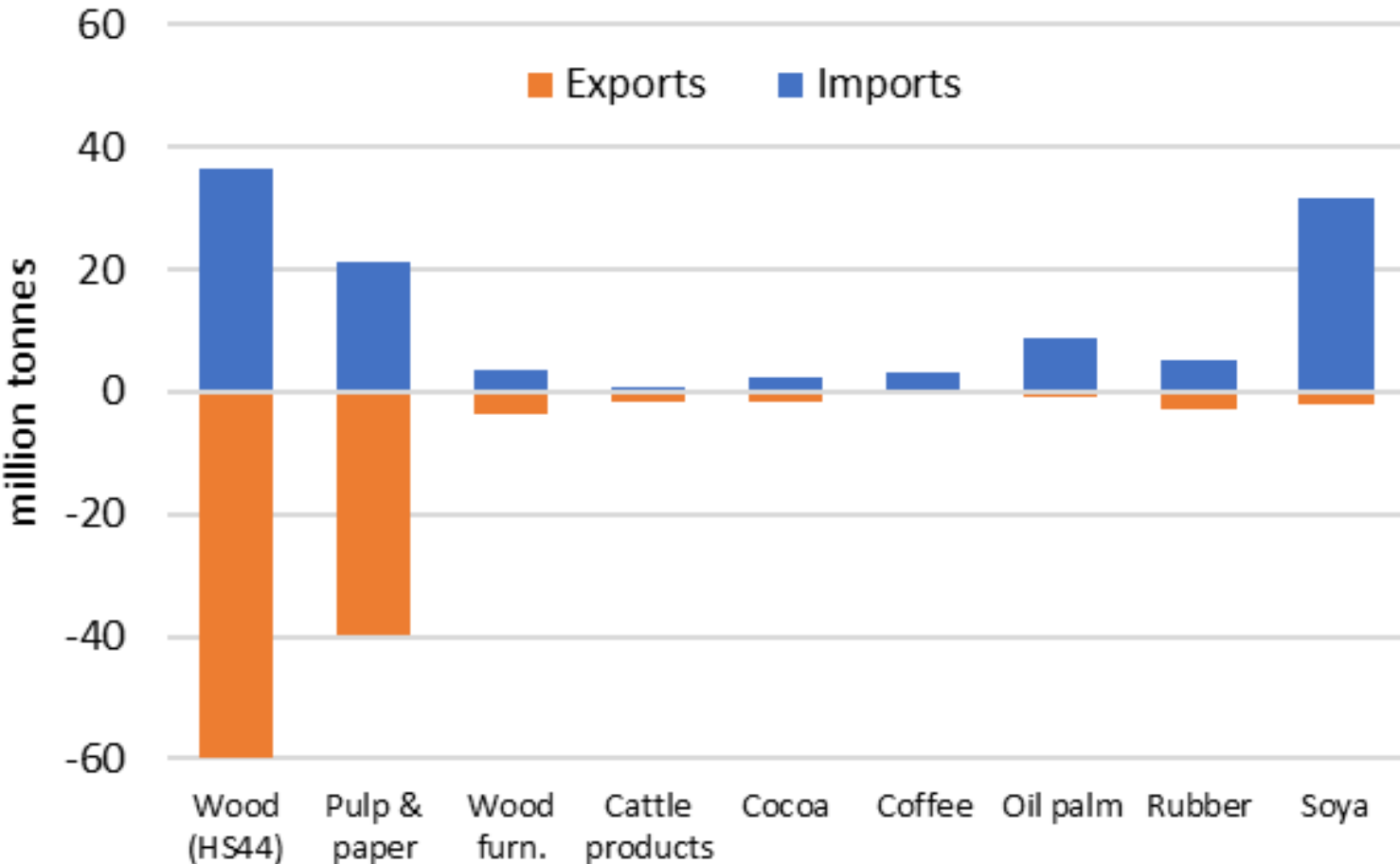
Palm oil and soya made up two-thirds of EU-driven deforestation from 2008-17

Share of EU-embodied deforestation due to eight commodities, 2008-2017 (%)



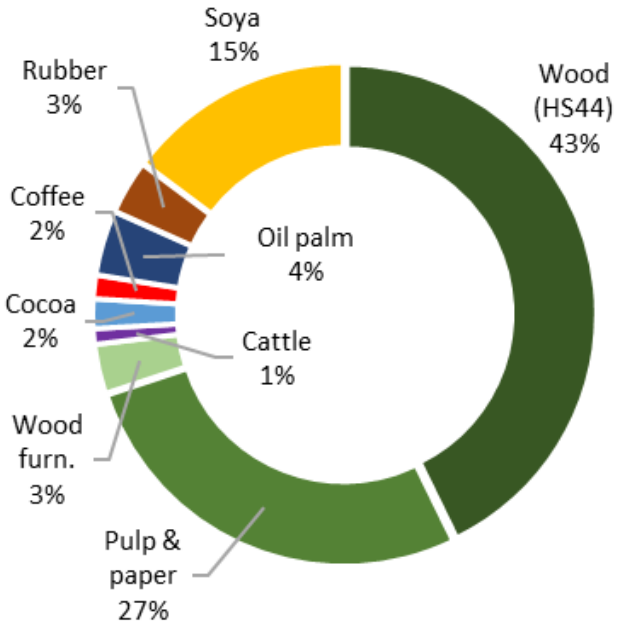
EU external trade in EUDR regulated products

Source: 2022 annual data from EU Comext



Wood based products account for 73% of all EU external trade volume in EUDR-regulated products, agricultural commodities for 27%

Proportion of external trade in 2022
% imports+exports (total 225 million tonnes)



Kew Gardens,
London

World Forest ID



Impacts for U.S. Producers, traders and operators

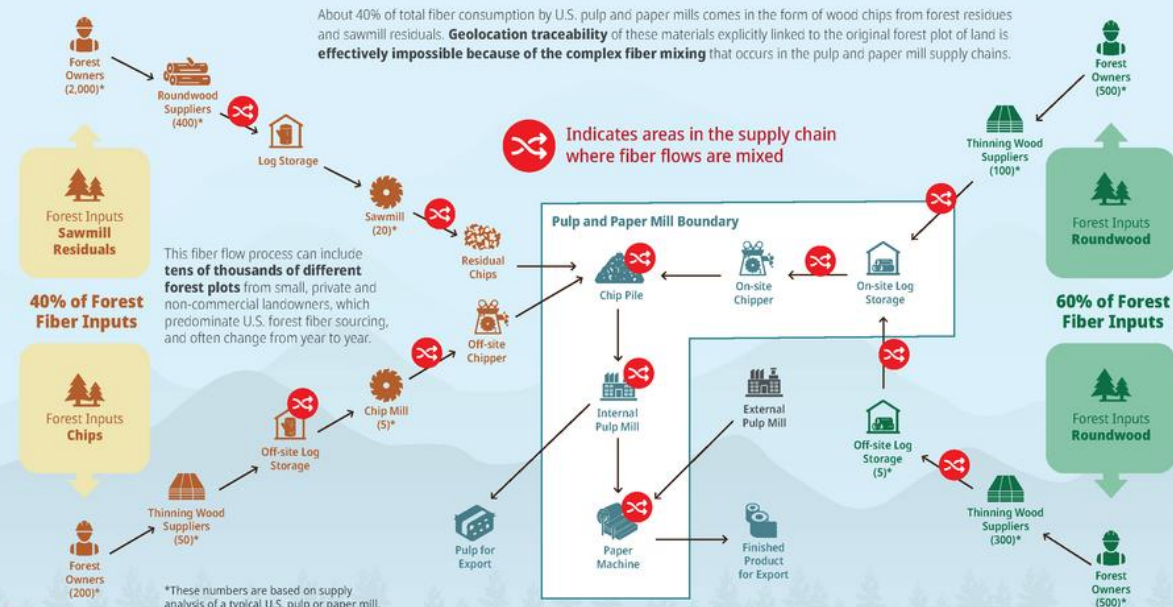
(U.S. Pulp and Paper, Wood Pellets Industry and American Hardwoods Export Council, US Lumber Manufacturers and others)

US Forest Industry is concerned about how EUDR will be implemented regarding strict geolocation traceability requirements. This requirement could pose technical trade barriers for U.S. companies based on our complex supply chain and fiber flow process like the pulp and paper, wood pellets and other less complex like the hardwoods furniture industry among others.

Currently, there is no technology to trace mixed forest residues coming from multiple sources (plots of land).

U.S. Fiber Flow for a Single Shipping Unit of Pulp or Paper

About 40% of total fiber consumption by U.S. pulp and paper mills comes in the form of wood chips from forest residues and sawmill residuals. **Geolocation traceability** of these materials explicitly linked to the original forest plot of land is **effectively impossible because of the complex fiber mixing** that occurs in the pulp and paper mill supply chains.



Impacts

- ❖ Forest products supply chains are complex.
- ❖ The economic trade value that could be affected exceeds \$4.5 Billion Dollars
- ❖ The US pulp and paper industry uses close to 40% of residues from sawmills or forest residues (branches, stumps, bark and more) result of thinning or harvest operations.
- ❖ Wood pellets industry close to 100 % forest residues
- ❖ The hardwoods forest industry uses raw material that comes from multiple sources fo developing different products.

Source: <https://www.afandpa.org/news/2024/why-eu-needs-reconsider-their-deforestation-law#:~:text=The%20EUDR's%20strict%20geolocation%20and,times%20throughout%20the%20production%20process.>

afandpa.org

Recent Developments

- ❖ Representatives of the U.S. forest products industry value chain have asked the European Commission to delay the implementation.
- ❖ Last March, 26 US Senators addressing the challenges of the law urged the U.S. Trade Representative (USTR) to engage with the European Commission to gain clarity around the regulation's requirements (https://www.king.senate.gov/imo/media/doc/senate_letter_to_ustr_re_eudr.pdf).
- ❖ Members of the U.S. House, including many from the Ways and Means Committee, sent a letter to the U.S. Trade Representative.
- ❖ Agriculture ministers from 20 of the EU's 27 member countries supported a call by Austria to revise the law and delay implementation, at a meeting in Brussels on March 26th, 2024 (<https://www.reuters.com/business/environment/majority-eu-countries-ask-bloc-scale-back-deforestation-law-2024-03-26/>).
- ❖ On May 30, 2024 U.S. Trade Representative Katherine Tai, alongside U.S. Agriculture Secretary Thomas Vilsack and U.S. Commerce Secretary Gina Raimondo, expressed concerns in the letter that U.S. producers are facing significant challenges in preparing to meet the new regulations (<https://dairynews.today/global/news/u-s-requests-eu-to-postpone-deforestation-linked-import-ban.html>).
- ❖ On July 2, 2024 In a letter to the Confederation of European Paper Industries (CEPI) members in response to their request for a delay, the European Environment Commissioner Virginijus Sinkevicius acknowledged such concerns but gave **no indication that Brussels was considering a delay** (<https://www.reuters.com/sustainability/eu-resists-calls-delay-deforestation-law-letter-shows-2024-07-05/>).



Questions?



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