



ITU Presentation

Deforestation

Who is TFT

The Forest Trust (TFT) is a global **non-profit organization** that helps companies understand and transform their product stories with informed decisions about their supply chains.*

- ✓ Founded in 1999
- ✓ We work on the **ground** (80% of our staff are experts working in the field)
- ✓ 260 people, 15 countries
- ✓ **Combination** of **environmental** and **social** expertise
- ✓ A **business-minded** non-profit focusing on products and supply chains
- ✓ Making the **connection** between **business** and **civil society**



*The Forest Trust, a charity (registered number 1114277) and company limited by guarantee (company number 3842323) registered and incorporated in England and Wales, with registered office located at The Pavilion, Botleigh Grange Business Park, Hedge End, Southampton SO30 2AF.



Our Product Groups & Experience

Membership of over 120 member companies: Retailers, manufacturers, growers, traders...



Wood



Pulp & paper



Palm Oil



Cotton



Beef & Leather



Stone



Rubber



Soy



Coffee



Cocoa



Sugar cane



Coconut



Key question: How do we define a forest?

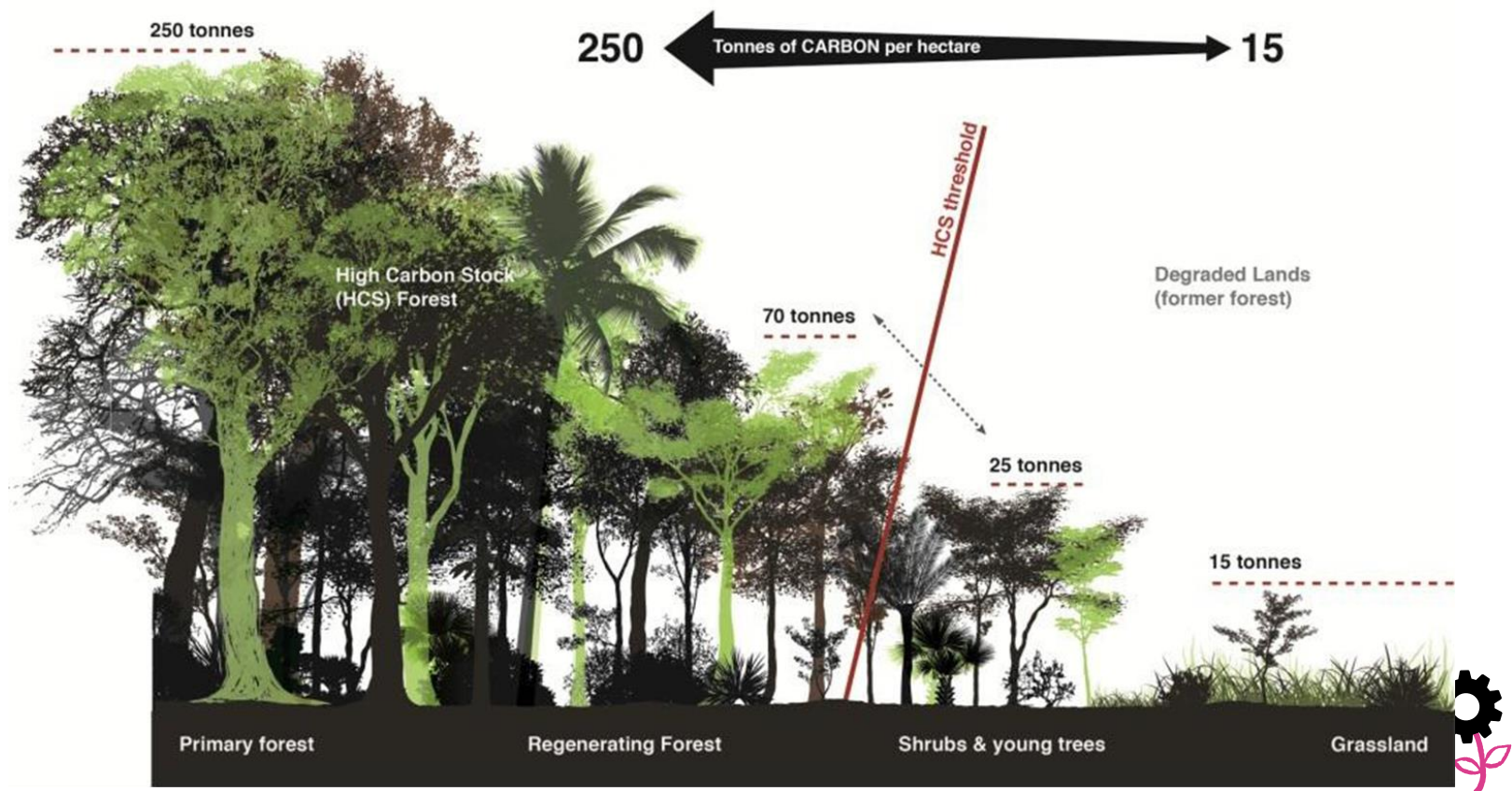


Sinoe County – Liberia



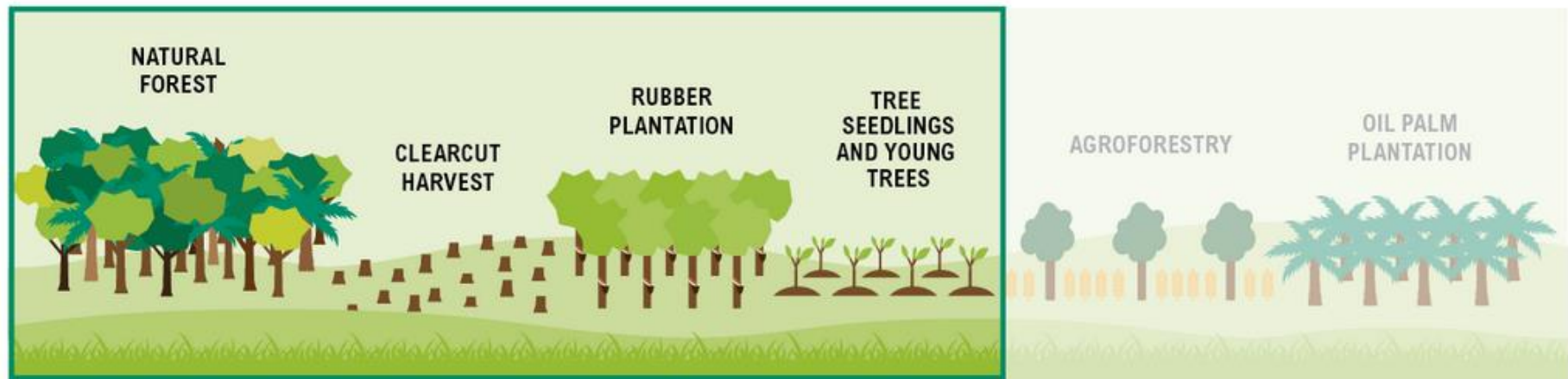
Defining deforestation

- **Multiple definitions of forests:**
 - FAO definition (tree canopy cover > 10 percent and area of more than 0.5 ha)
 - Forest cover from Uni of Maryland (all vegetation > 5 meters in height)
 - High Conservation Value Forests
 - High Carbon Stock Forests



What is Considered a “Forest?”

FOREST RESOURCES ASSESSMENT (FRA) adopts a common definition of “forest” to monitor global forest area based on biophysical and land use criteria.



GLOBAL FOREST WATCH (GFW) monitors all forms of tree cover to detect loss and gain based on biophysical criteria, and uses the term “tree cover” instead of “forest”.



Deforestation worldwide

Annual net change in forest area (1990-2015)

Net gain km²/year

500-2,500

2,500-5,000

>5,000

Net loss km²/year

500-2,500

2,500-5,000

>5,000

Small change <50
(gain or loss)

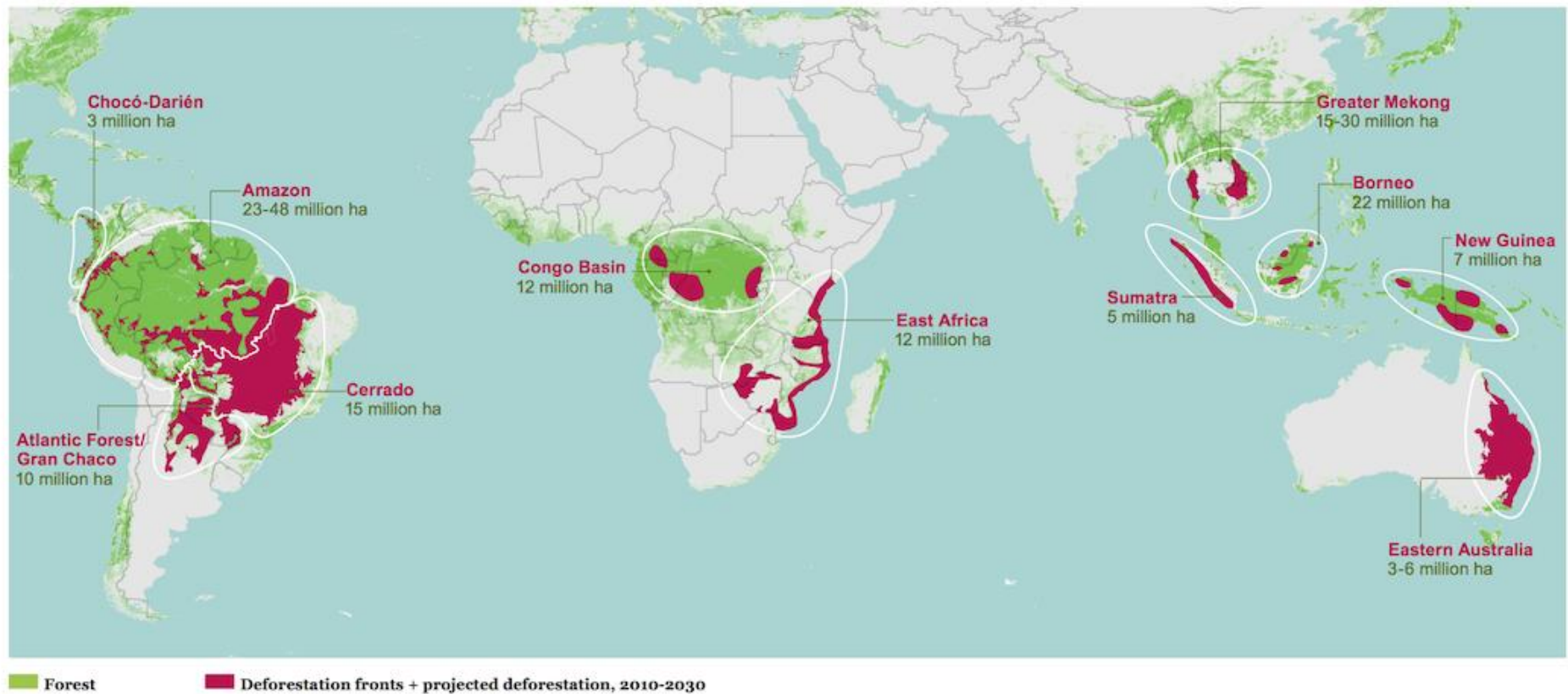
Source: FAO, 2015. Global Forest Resources Assessment. FAO. Rome

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Mostly tropical forests under threat



Projected deforestation fronts 2010 - 2030



Why Tropical deforestation is an issue

- **Biodiversity:** only 12% of the land-area of the Earth, yet they are home to between 50 and 90 percent of the world's species
- **Climate regulation:** Tropical forests regulate global and regional climate-systems, rainfall, massive carbon reserves (approx. 25% of global carbon stock)
- **Soil erosion:** The loss of trees, which anchor the soil with their roots, causes widespread erosion throughout the tropics
- **Natural pharmacy:** Twenty-five percent of all current western *medicines* are derived from plants found in rainforests



Drivers of tropical deforestation

Tropical deforestation due to

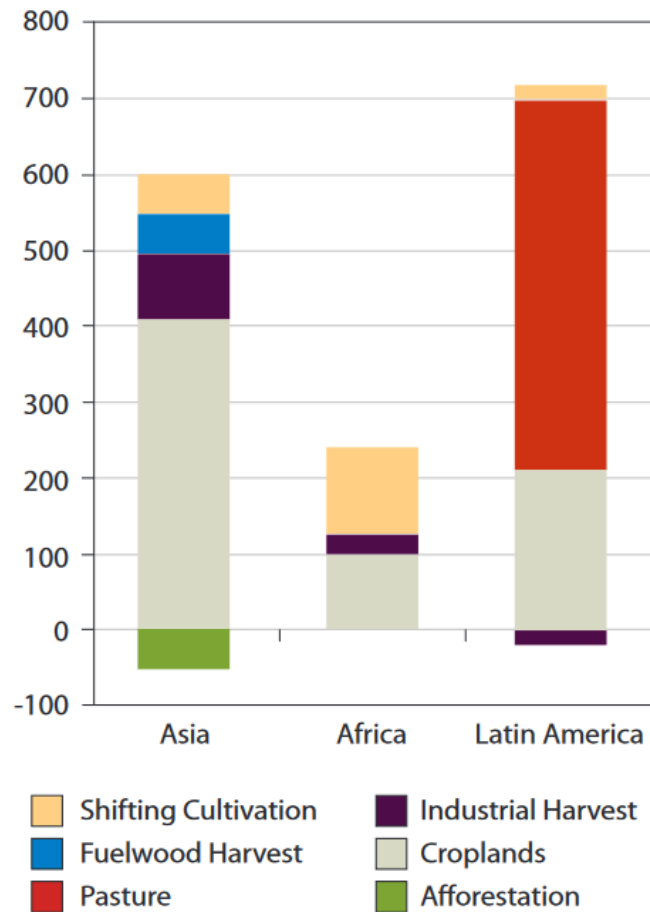


Deforestation occurs predominantly around roads and major rivers

95 percent of deforestation in the Brazilian Amazon occurs on land less than 5 kilometers from a road or navigable river. *C. Barber, Biological Conservation (2014)*



Drivers of tropical deforestation



BRAZIL [30.6 Mha]

Total forest loss 2000-2012

DRIVERS OF DEFORESTATION:



17% exported

BEEF

75% exported

SOY



deforestation due to commercial agriculture (agro-conversion)

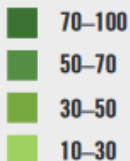


illegal agro-conversion



illegal agro-conversion exported

PERCENTAGE OF COUNTRY COVERED BY TROPICAL FOREST (2000)



BOLIVIA [2.8 Mha]

Total forest loss 2000-2012

DRIVERS OF DEFORESTATION:



75% exported

SOY



deforestation due to commercial agriculture (agro-conversion)



illegal agro-conversion



illegal agro-conversion exported

MALAYSIA [4.7 Mha]

Total forest loss 2000-2012

DRIVERS OF DEFORESTATION:



90% exported

OIL PALM



deforestation due to commercial agriculture (agro-conversion)



illegal agro-conversion



illegal agro-conversion exported

PARAGUAY [2.4 Mha]

Total forest loss 2000-2012

DRIVERS OF DEFORESTATION:



94% exported

SOY



deforestation due to commercial agriculture (agro-conversion)



illegal agro-conversion



illegal agro-conversion exported

INDONESIA [15.5 Mha]

Total forest loss 2000-2012

DRIVERS OF DEFORESTATION:



75% exported

OIL PALM & PULP PLANTATION



deforestation due to commercial agriculture (agro-conversion)



illegal agro-conversion



illegal agro-conversion exported

PAPUA NEW GUINEA [0.6 Mha]

Total forest loss 2000-2012

DRIVERS OF DEFORESTATION:



100% exported

OIL PALM, COCOA, OTHERS



deforestation due to commercial agriculture (agro-conversion)



illegal agro-conversion



illegal agro-conversion exported

SOY
BEEF
OIL PALM
PULP PLANTATION
COCOA

Various types of deforestation

- **Clearecutting for agricultural production:** eg. Palm, rubber, pulp and paper, soybean
 - Industrial scale (1000s of ha/year)
 - Smallholder/farmer scale (10s of ha/year)



Various types of deforestation

- **Degradation and gradual clearing:** Logging, cocoa, roads etc...
- Much harder to identify via remote sensing



Remote sensing tools that can be mobilised

- **Optical imagery:**

- Medium to high resolution for clearcutting
- Very high resolution for degradation
- Limited by:
 - Heavy cloud cover in tropical areas – frequency issues
 - Difficulty to differentiate some tree crops from forests (eg. old rubber plantations)

- **Radar (SAR) imagery:**

- Some types of SAR imagery can pierce through cloud cover
- Some issues with accuracy and slopes

- **Vegetation indexes:**

- NDFI
- Canopy Shade factor
- Etc...



Example of NDFI and CSH analysis

