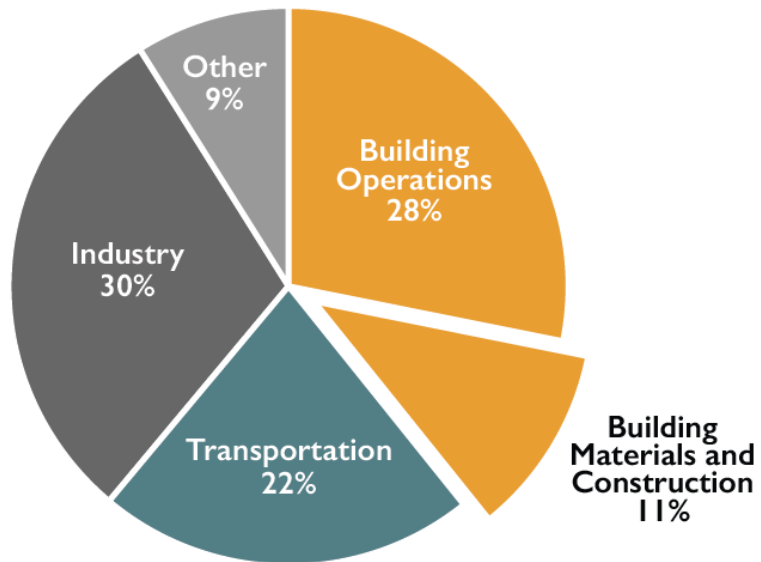


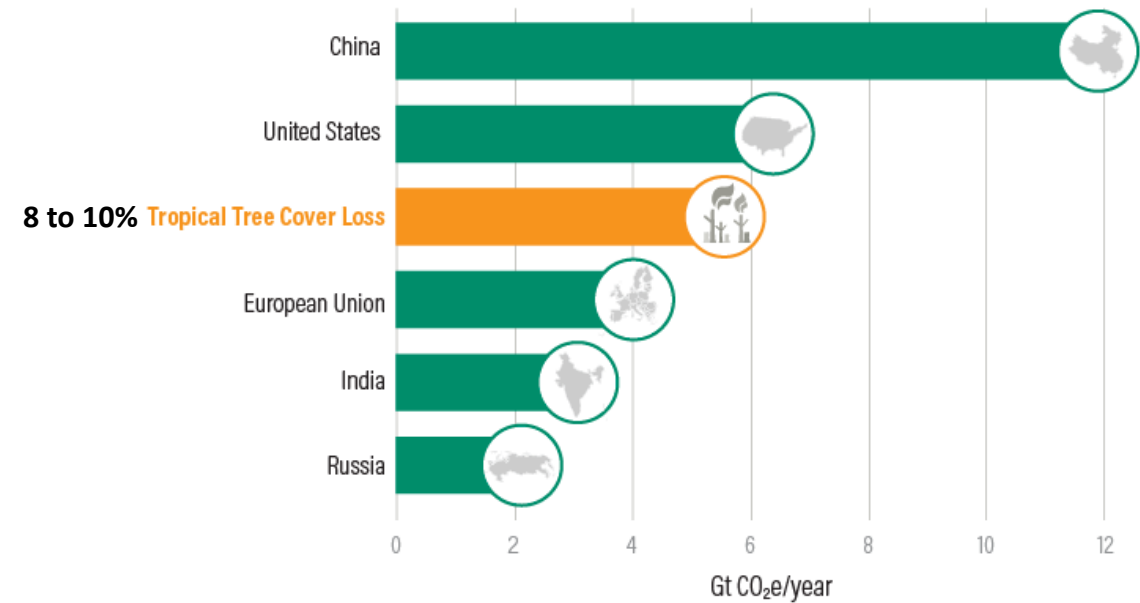
Case Study: Tropical Forestry

Reversing Deforestation and Providing Negative Carbon Wood Products

Global CO₂ Emissions by Sector

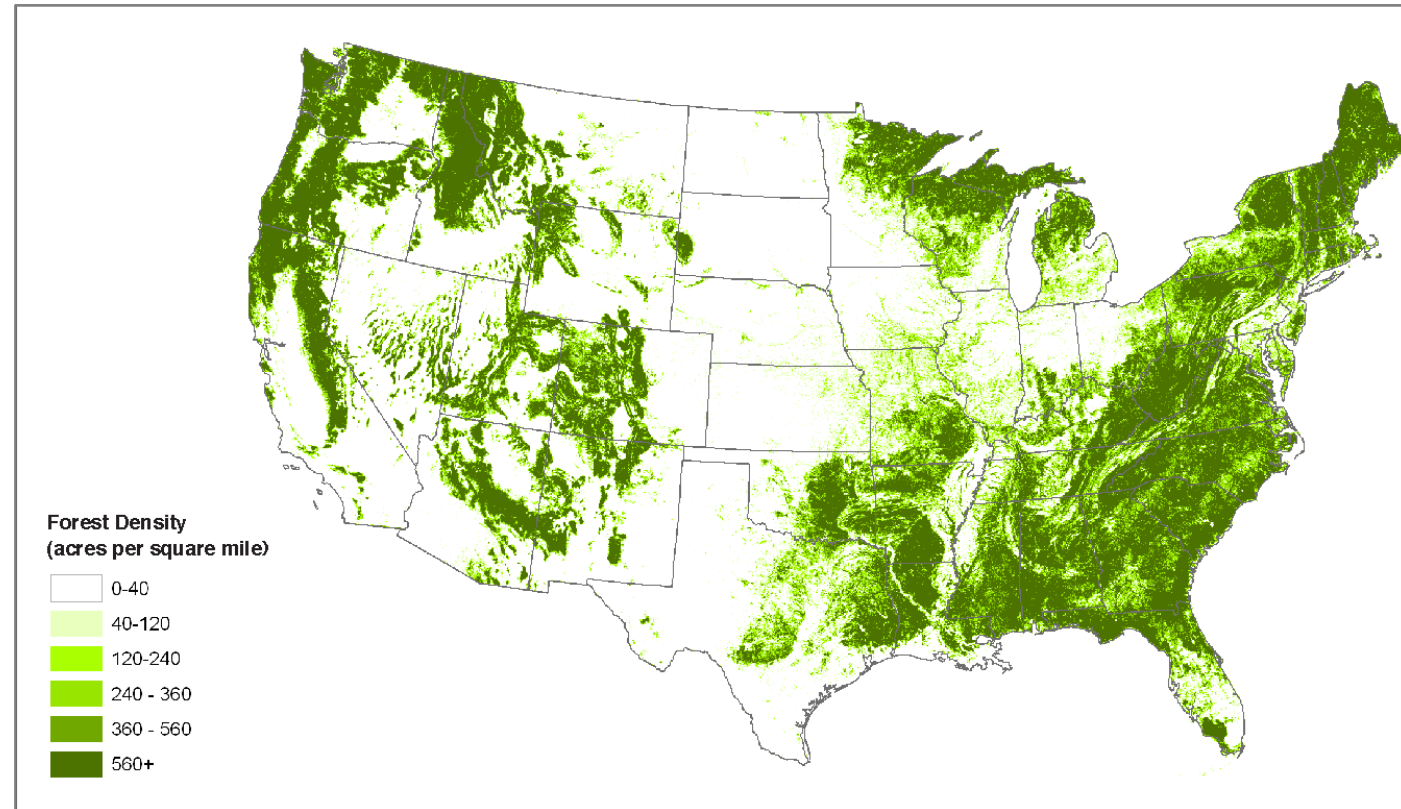
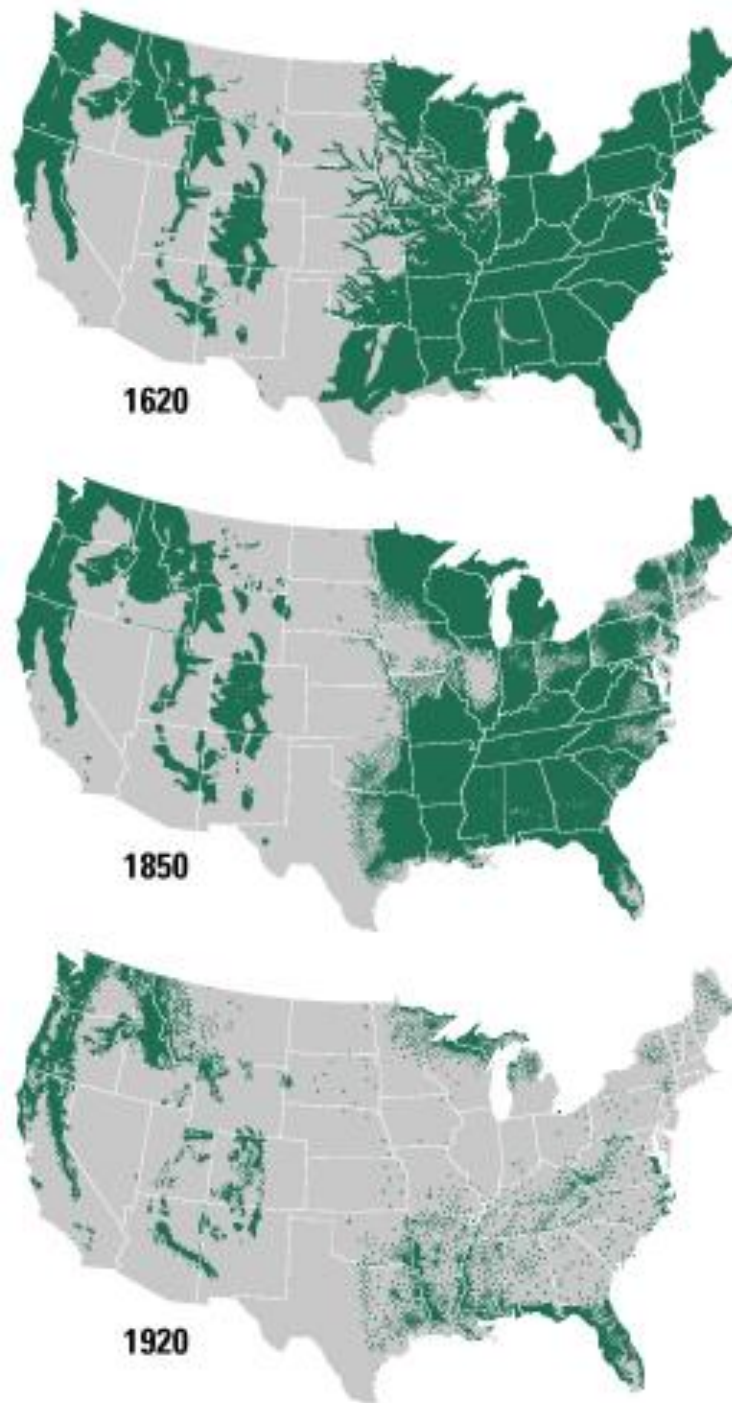


If Tropical Deforestation were a Country, it Would Rank Third in CO₂e Emissions



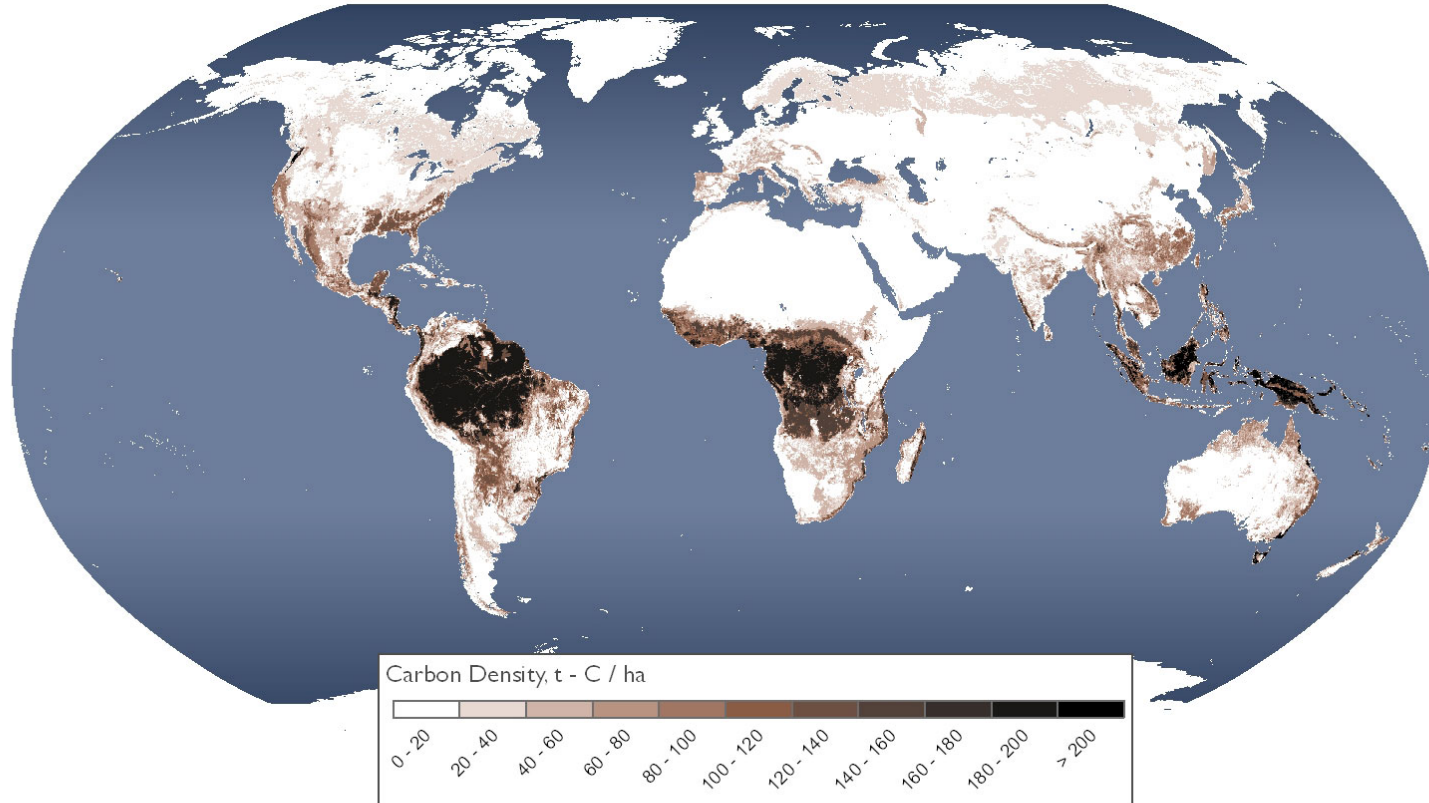
US Deforestation and recovery over 400 years. Large carbon emissions and biodiversity impact. Then, a century of restoration.

Restored forest is supported by a forest products industry. Forests and wood products are essential to rural economy. Can we take this model to the tropics?



Tropical Forests: Endangered Pool of Carbon -- 375 gigatons CO₂e

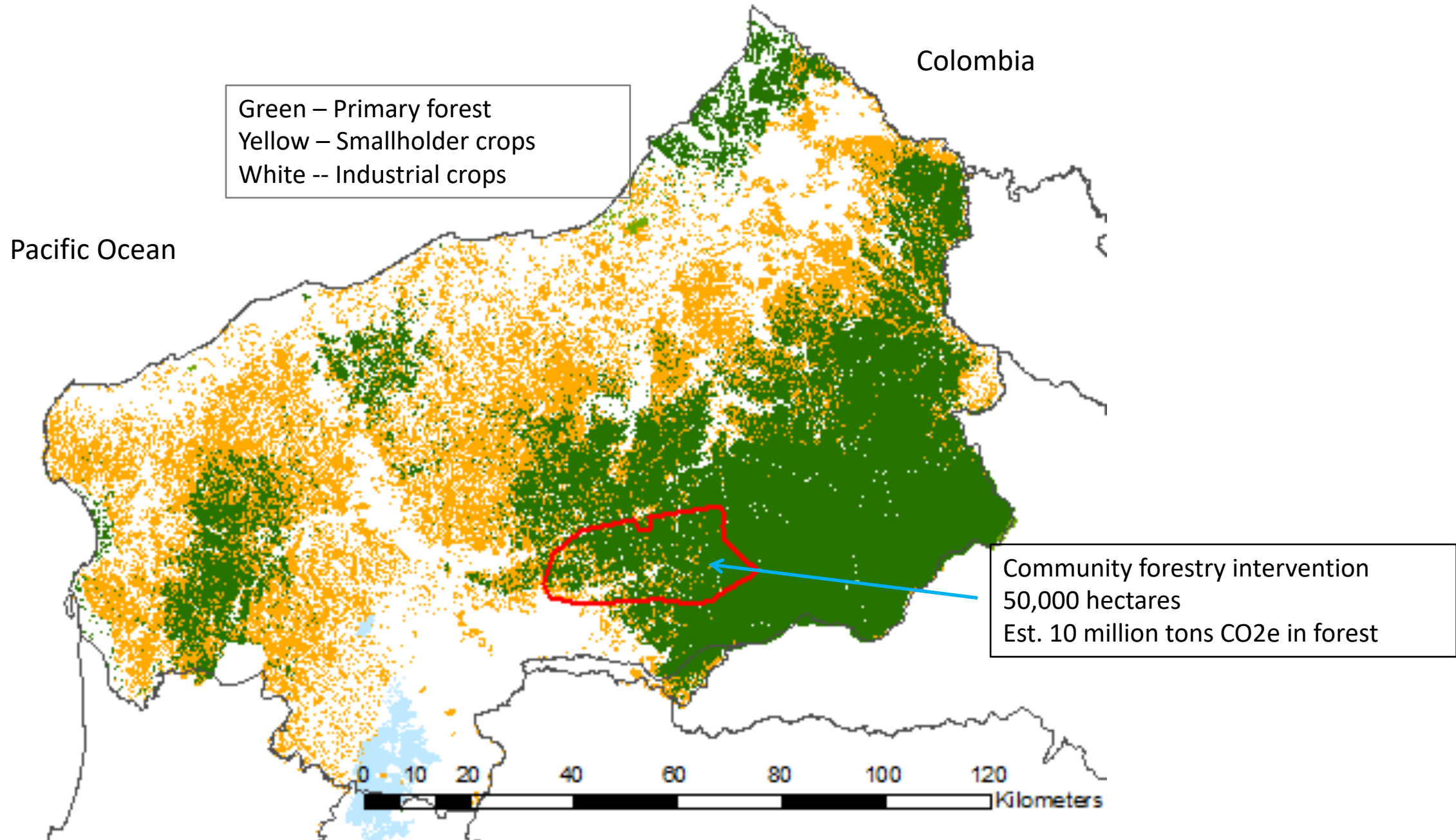
Global Above- and Below-ground Living
Biomass Carbon Density



Can't let US forest history be replicated in tropical forests or the planet will bypass 2.0 C.

Plan A: Global carbon market and large subsidy to tropical forest owners (REDD+). Adequate market hasn't evolved yet.

Plan B: Case Study, Whole Forest: Forest Product Economy in Coastal Rainforests of Ecuador



Drivers of deforestation

- Diverse forests, markets for only a few “commercial” species.
- Roads allow harvest of those species, leaving low-value forest.
- Roads provide access to global agriculture markets.
- Landowners convert forests to cattle and crops.
- To protect the forest need to raise its value to forest communities



Building a Community Forestry Wood Products Economy

- Community enterprise – community shareholders
- Forest governance: 20-year contracts with families
- Low impact harvest 3-5 trees per hectare (20 years)
- Prevent roads: Mill in forest, cable transport
- Design products using many unknown species



- Manufacture in forest communities
- 100 local jobs @ \$11,000/year

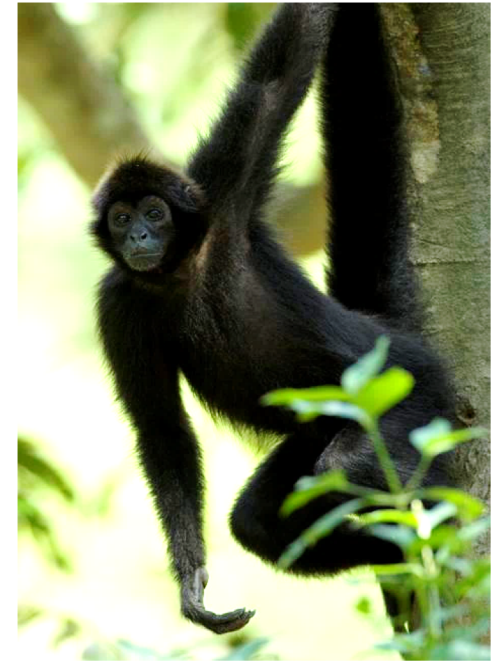




Connecting Community Forests to Green Building Markets

- FSC and VCS carbon certification
- Chain of custody from forest to US client
- LCA and EPD quantify carbon benefit to building project
- 1,000 SF flooring net carbon impact – 20 to 25 tons CO₂e

Protecting biodiversity:
Endangered Coastal
Spider Monkey



International Contemporary
Furniture Fair, 2019
Award: First in Flooring