Sustainable Forestry
Renewable Materials Storing Carbon

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The use of a variety of forest products supports sustainable management of forest lands.
Trend in US forestland area, 1630 to present

Note: Data prior to 1950 are based on historical evidence, not field sampling.
Source: USDA Forest Service, Forest Inventory Analysis Program. 2006.
Regional forest trends in the 48 States, 1760-2000

Original forests in what is now the U.S. totaled about 1.65 billion acres (including what is now the State of AK and HI). Clearing of forest land in the East between 1850 and 1900 averaged 13 square miles every day for 50 years; the most prolific period of forest clearing in U.S. history. This coincides with one of the most prolific periods of U.S. immigration. Currently, forests cover about 749 million acres of the U.S. or about 33 percent of all land.

Basis for chart data:

- 1840- pres. FIA Field Inventory Reports
- 1900 – 1930 Forest Service report estimates prior to FIA field inventories.
- 1850 – 1890 Based on Bureau of the Census land clearing statistics.
- 1760 – 1840 Based on estimates of forest clearing proportional to population growth.

Source: National Report on Forest Resources and other historic data

Return to FIA Home
U.S. growing stock volume, billion cubic feet, and Timberland area, million acres 1953–2017

Forest Certification and Regulations

Carbon Benefits

Forests sequester carbon
(climate change mitigation)

Wood products sequester carbon
(wood is 50% carbon by dry weight)
Forests and Carbon flows on a stand level

Source: Eliasson et al. 2011
a. Forest Stand

Forest Carbon

0  Time

b. Forest Parcel

Forest Carbon

0  Time

c. Forest Landscape

Forest Carbon

0  Time

Source: Adapted from Colnes (2011)
Figure 1. Carbon storage over time under a no-harvest scenario compared to a sequence of 45-year rotation harvest, illustrating additional carbon storage from making and using wood products that substitute for concrete walls in residential housing construction. Diagram courtesy of Jay O'Laughlin, University of Idaho as part of the 2008 Policy Analysis Group on Carbon Sequestration Strategies in the Forest Sector.
Circularity
Renewable Resource | Carbon Sequestration

Source: Building with Wood – Proactive Climate Protection, Dovetail Partners, Inc.¹
“In the long-term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fiber, or energy from the forest, will generate the largest sustained mitigation benefit.”

- International Panel on Climate Change (IPCC) Assessment Report
Conclusions

- North America has the ecology for growing trees, and forest area in the US has been stable for many generations.
- Forests and forest products provide natural climate solutions in the wood and in our built environment and they strengthen our rural economies.
- Strong markets for wood products provide incentives for landowners to keep lands forested.

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