THE ROLE OF FOREST MANAGEMENT IN CLIMATE MITIGATION

Management Practices and Market Initiatives

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June 23, 2021

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MOTIVATING CLIMATE CHANGE AND CARBON INITIATIVES

Climate change remains a “top of mind” issue for many consumers and stakeholders.

Brand owners and companies now have sustainability goals that include climate and/or carbon.

Investment and ESG often target climate and carbon metrics.

Forest certification is helping to mitigate climate change through their use of climate-focused standards (e.g., SFI Objective 9).

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CLIMATE CHANGE AND FOREST CARBON

SUSTAINABLY MANAGED FORESTS CAPTURE CARBON FASTER AND STORE MORE CARBON, HELPING US FIGHT AND MITIGATE CLIMATE CHANGE

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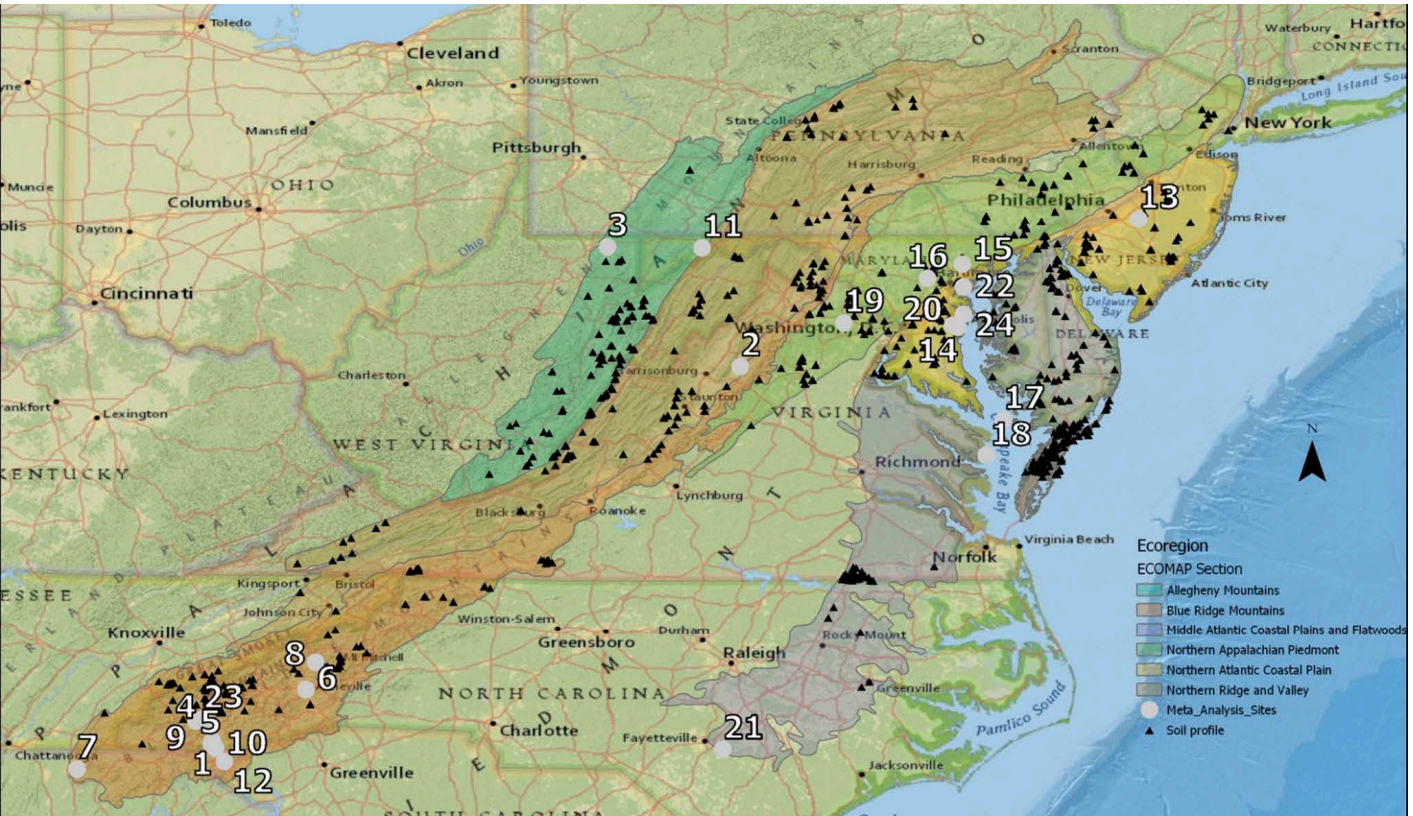
QUANTIFYING CARBON FOOTPRINTS

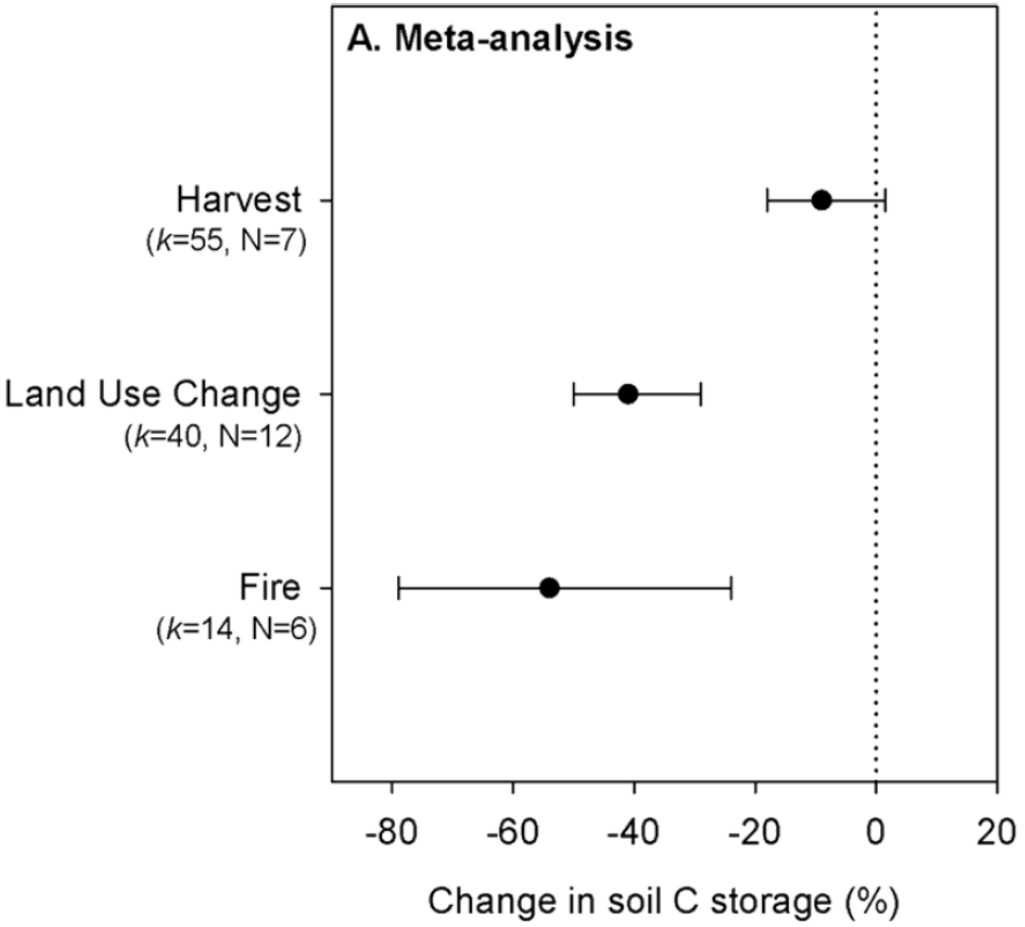
SFI certified lands store massive amounts of carbon, an amount increasing every year ***after*** accounting for emissions from harvesting and fire.

FOOTPRINT	CARBON STORED (CO2E)	CARBON SEQUESTERED ANNUALLY (CO2E/YEAR)	CARBON SEQUESTERED PER HECTARE PER YEAR
Lower 48 States	>20 billion tons	>235 million tons	8.8 tonnes per year
Canadian Sample **(18.3%)**	>22 billion tons	>4.5 million tons	0.2 tonnes per year

CLIMATE CHANGE & CARBON

BMPs on SFI certified lands (e.g., slash retention) helps conserve carbon in soils.





AMERICAN FORESTS

SUSTAINABLE FORESTRY INITIATIVE CONSERVATION

CLIMATE CHANGE & CARBON

BETTER SOILS FROM BETTER FOREST MANAGEMENT KEY TO A BETTER CLIMATE FUTURE

Forest soils are informing SFI objectives related to soil productivity, carbon storage, and conservation.

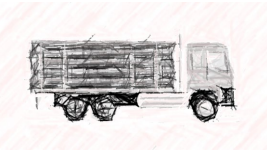
Project Partners: University of Maine, Cooperative Forestry Research Unit, Center for Research on Sustainable Forests, Northeastern Soil Monitoring Cooperative, University of Toronto

QUANTIFYING THE CARBON CYCLE

Atmospheric Emissions

Atmospheric Sequestration

Storage in Products



SOILS
Carbon Storage and Sequestration???

New Equipment

Innovative Practices

Quantifying the Results

FORESTRY PRACTICES AND THEIR USE IN CLIMATE ADAPTATION AND MITIGATION

ADAPTATION

- Stand diversity management (increase diversity)
- Assisted migration – seed selection better suited to conditions
- Thinning – increased water availability
- Thinning – reducing fuel loads
- Thinning – improved stand health, reduces risk from forest pests.
- Increased culvert sizes – improved sediment control and design for 100-year events
- Road design/location – planning for wildfire management

MITIGATION

- Seed selection/enhancement for increased vigour
- Thinning – increased water/nutrient/sunlight availability
- Thinning – reducing fuel loads
- Soil protection to maintain/conserve soil carbon
- Slash distribution – maintain/increase soil carbon
- Fertilization – improved establishment success and growth rates.

MARKET-BASED DRIVERS OF CLIMATE-RELATED INITIATIVES

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ASSESSMENT OF CLIMATE BENEFITS OF SFI FOREST CERTIFICATION

Examined the climate benefits of SFI Forest Certification, including a qualitative analysis of SFI programmatic documents, observations of SFI training activities, and interviews with certification professionals. Documented "Climate Smart" forestry in 3 categories

Project Partners: Michigan State University, USDA National Institute of Food and Agriculture, Michigan SFI Implementation Committee, and Weyerhaeuser

CLIMATE SMART FORESTRY

SFI developed a **new objective** focused on climate change mitigation and adaptation.

Objective:

- Program to **identify climate change risks** to forest and forest operations and the development of adaptation objectives and strategies.
- Program to **identify opportunities** to mitigate climate-related impacts associated with forest operations.

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FIRE RESILIENCE AND AWARENESS

SFI STANDARD REQUIREMENTS:

ON LANDS OWNED OR MANAGED

SFI-certified organizations limit susceptibility to undesirable impacts of wildfire, promote healthy and resilient forest conditions, and support restoration of forests following wildfire damage.

COMMUNITY ENGAGEMENT EFFORTS

SFI-certified organizations engage in efforts to raise awareness of and take action towards benefits of fire management and minimization of undesirable impacts of wildfire.

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CLIMATE INITIATIVES IN THE BOREAL REGION

- Climate-related concerns are driving both market and regulatory concerns
- Research is needed to
  a) Effectively quantify the carbon dynamics of the boreal
  b) Understand the effects of practices on carbon, particularly in soils
- Market-based initiatives (e.g., forest certification)can help

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DISCUSSION

BETTER CHOICES FOR THE PLANET

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