MSU Forestry Department
Forest Carbon and Climate Program

Assuring Sustainability in Forest Management

General concepts and the role of Certification

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Woodworks, October 2020
Forest-based strategies for mitigating climate change

1. Increase or maintain forestland
   - Avoiding Deforestation and Reforestation

2. Maintain or increase carbon stocks
   - Changing management plan; Adapting to Climate Change

3. Increase Wood Use
   - Substituting wood for energy-intensive building materials
A Spectrum of Forest Benefits

**Plantation**
- Less biodiversity
- Lower carbon storage on land
- Likely higher carbon sequestration rates
- High forest product production
- Could be targeted for high-risk areas (e.g., fire prone)

**Selection Cutting**
- Relatively high biodiversity
- Medium carbon storage on land
- Medium but consistent carbon sequestration rates
- Full range of ecosystem services
- Mix of timber and non-timber forest products

**Old growth**
- High overall biodiversity
- Highest carbon storage on in forest ecosystem pools
- Possibly lower sequestration rates
- Very limited timber products
- Could be targeted for low-risk areas
- Recreation, habitat, etc.
Presentation Outline

Introducing Certification
Forest Management Certification
Fiber Sourcing and Chain of Custody Certification: Alignment with Climate Change
FCCP Training and Engagement
Introducing Certification

Certified sustainable forestry and forest products
Climate-Smart Forestry (CSF)

- Targeted approach/strategy to increase climate benefits from forests and the forest sector
- Respects and embraces other needs related to forests
- Three pillars:
  1. Reducing and/or removing greenhouse gas emissions to mitigate climate change
  2. Adapting forest management to build resilient forests
  3. Active forest management aiming to sustainably increase productivity and provide all benefits that forests can provide
What is Certification?

**Forest certification:** a mechanism for forest management, monitoring, tracing, and labeling of timber, wood and pulp products and non-timber forest products, where the quality of forest management is judged against a series of agreed standards. *(WWF, 2018)*

**Important terms**

**Standard** – the requirements against which certification assessments are made

**Certification** – the confirmation that the forest and its management conforms to a particular standard

- Assessed by third party, who reviews documentation, observes the forest, interviews management and employees, and uses evidence from third parties
- Trained assessors following ISO practices

**Accreditation** – the mechanism for ensuring that the organizations that undertake certifications are competent and produce credible results
Comparing Management

Short-term Thinking
- Easiest route into forest
- Emphasis on extraction and high financial return
- Not necessarily based on research, training, or best practices
- Damage to, and resulting mortality of, remaining trees
- Limited consideration of soil, water, and habitat impacts

Long-term Thinking
- Certification solidifies these practices in standards
- Research and data-informed decision-making
- Required considerations of waterways, sensitive areas, habitat
- Minimizing damage
- Move beyond legal minimums in many areas
- Examples of practices:
  - Reduced Impact Logging (in tropics)
  - Best Management Practices

Note: Possible to pursue best practices without certification, but certification encourages additional adoption
Certification provides:

- Facilitates climate-smart forestry/forestry BMPs
  - Technical guidance and support to working forests
  - Communication network of best practices
  - Education and engagement for deployment of improved practices
- Forest certification is based on principles that promote sustainable forest management
- A range of benefits in its guidance
  - Carbon benefits are just a one such benefit
- Assurances to a range of stakeholders including investors and donors, governments, shareholders and employees, and purchasers
Certification Bodies

• Sustainable Forestry Initiative (SFI)
  • Housed under Programme for the Endorsement of Forest Certification (PEFC)
• Forest Stewardship Council (FSC)
• American Tree Farm
  • Under PEFC

Forest Management Certification
Best Management Practices (BMPs)

- Guidelines to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources
- National core BMPs in 11 categories
- Not required in all states, certification bring more actors into alignment where they are not required

Example topics and requirements:
- Cleaning up fuel spills
- Minimizing ruts left by heavy equipment
- Installing properly sized culverts and bridges that allow fish passage
- Minimizing soil disturbance
- Water quality considerations
- Biodiversity and Wildlife Habitat
- Forests with Exceptional Conservation Value
- Reducing forest impacts during harvest

- Michigan example: BMPs not required, certification boosts adoption

Sources: USFS, State of MI
Basics of forest management certification

• How to become ‘Certified’?
  • A forest owner must follow set guidance
  • Inventory, implementation of BMPs, monitoring
• Auditing by third-party verifiers
• Loggers required to complete training
• BMPs for that state are required
• Many of these have implications for carbon storage
• Additional activities
  • Community and outreach
  • Research
Fiber Sourcing and Chain of Custody
Chain of Custody (CoC)

- CoC traces certified materials through the supply chain
  - Verifies that certified material is identified or kept separate from non-certified material
- Allows for communication about certified forest products
- Direct data and linkages forest to product
- CoC picks up after Forest Management Certification

FSC, 2020
Fiber Sourcing and Chain of Custody Certification

• Chain of Custody
  • Refers to the entire path of **certified** products from forests through to the supply chain

• Fiber sourcing
  • Refers to **uncertified** wood entering the mill for processing
  • Emphasis on legal, responsible sources if not certified

Source: [https://greenblue.org/module-2-the-role-of-forest-certification/](https://greenblue.org/module-2-the-role-of-forest-certification/)
Responsible Fiber Sourcing/Controlled Wood

- Fiber sourcing refers to the wood entering the mill for processing, which are not be from certified
  - Emphasis on “legal and responsible”

- SFI Fiber Sourcing
  - Requires BMPs for the wood
  - Using trained loggers
  - Prohibits
    - Sourcing from areas without effective social laws
    - Illegal timber

- FSC Controlled Wood
  - Identified material from acceptable uncertified sources that can be mixed with FSC-certified material in products that carry the “FSC Mix” label
  - Prohibits
    - GMO trees
    - Conversion to non-forest use
    - Threats to forests with High Conservation Values
    - Violation of traditional or civil rights
    - Illegal harvest

Example of fiber sourcing from a major timber company
Certification: Alignment with Climate Change

Pillars are in line with forest adaptation and mitigation
Mitigation & Adaptation

• Harvested wood is part of the climate solution – but ONLY if it is sustainable

• Certification can ensure sustainability in management and procurement (and in climate benefits!)

SFI example:

Obj. 2: Forest Productivity and Health
• to protect forests from economically or environmentally undesirable levels of wildfire, pests, diseases, invasive exotic plants and animals, and other damaging agents and thus maintain and improve long-term forest health

Resilient, healthy forests = climate adaptation
Communication & Stakeholder Engagement

Clear Messaging

• Visible and recognizable logos
• Branding on labels and in stores
• Built a foundation that the climate change message can grow from
• Promotes investment in sustainable forestry
• Consumer purchasing decisions
• Foundation for lower emission products and materials
Low Risk of Deforestation In US And Canada

“Sustainably managed forests are healthy, productive, resilient and renewable ecosystems, which provide vital goods and ecosystem services to people worldwide.”
— UN Forum on Forests - May 1, 2017

“The impact on forest area of “reverse drivers” such as afforestation policies is particularly evident in high-income countries such as the United States of America and those of Western Europe, where net deforestation bottomed out many decades ago…”
— 2016 State of the World’s Forests Food and Agriculture Organization of the United Nations

FOREST PRODUCTS FROM THE U.S. AND CANADA POSE EXTREMELY LOW RISK FOR DEFORESTATION

The most recent data available from the U.S. Forest Service show a continuing trend toward increases in forest area nationwide. A 2012 study showed the nation’s forests increased by roughly 7 million acres, or 1% between 2007 and 2012.

Canada’s 348 million hectares of forestlands represent about 9% of the world’s forest cover, but account for only 0.3% of global deforestation. The conversion of forest to agricultural land is decreasing but it remains the largest contributor to deforestation in Canada. The infinitesimal contribution the forest sector makes to deforestation is from building permanent logging access roads. Forest harvesting practices in Canada are tightly regulated to ensure the long-term sustainability of this important natural resource.

FCCP Training and Engagement
Professional Short Courses

Michigan State University Forestry Department

Forest Carbon & Climate Program

Mini-course
Forest Certification and Climate Change

Learners will develop a robust understanding of forest land values and ecologic services linking carbon management and climate change mitigation activities with forest certification.

Graduates will develop expertise in:
- Valuing working forests for carbon sequestration
- Climate change adaptation and mitigation strategies in forest certification standards
- Climate benefits for forest certification in wood products
- Distinguishing climate benefits in chain of custody standards
- Ensuring climate values of harvested wood products through certification

Course Sections
- Conceptual Introduction and Overview
- Physical Science of Forests and Climate
- Forest Certification and Climate Change

Timeline
Online Self-paced 2-3 Weeks

Audience
- Landowners
- Natural Resource Professionals
- Conservationists
- Educators
- Extension Agents

Start Date
Rolling Start Date

Contact
canr.msu.edu/fccp
forestc@msu.edu

Register: https://www.canr.msu.edu/fccp/
Open Source Library (FCCP ORL)

Interactive Module

USDA Climate Change Resource Center (CCRC)

Graphics/Slides

Videos

Light-board carbon calculation demonstration with Dr. David MacFarlane

SPEAKER LINEUP
2020-21 FCWG LEARNING EXCHANGE SERIES 3-4PM EST

**OCT. 7**
Ensuring the Integrity of Forest Carbon Offsets
Christie Pollet-Young and Alexa Dugan

**NOV. 4**
American Carbon Reforestation: The Need, The Challenges, and The Opportunities
Mike Smith

**DEC. 2**
New Approaches to Connect Forest Landowners to Voluntary Offset Revenue
Dylan Jenkins

**JAN. 6**
Regional Scale Forest Product Markets and Effects on Forest Carbon Sequestration
David Wear

**FEB. 3**
Innovative Approaches to Increasing Carbon on the Landscape
Eric Sprague, Austin Rempel, Christine Cadigan, and Nathan Truitt

**MAR. 3**
Forests and Carbon in Sustainable Business
Luis Rochartre

**APR. 7**
Urban Forests and Carbon
Dave MacFarlane and Leslie Brandt

**MAY 5**
Ecosystem Services Markets Conceived and Designed for Agriculture
Thayer Tomlinson and Debbie Reed

For more information on the 2020-21 FCWG Learning Exchange Series, visit the MSU FCCP website.
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