FORESTS FOR THE FUTURE

NATURE GROWN SOLUTIONS

Translating science into practice through forest certification

Addressing the co-occurring climate and biodiversity crises

LAUREN T. COOPER

Chief Conservation Officer
Sustainable Forestry Initiative

HEALY HAMILTON

Chief Scientist
Sustainable Forestry Initiative

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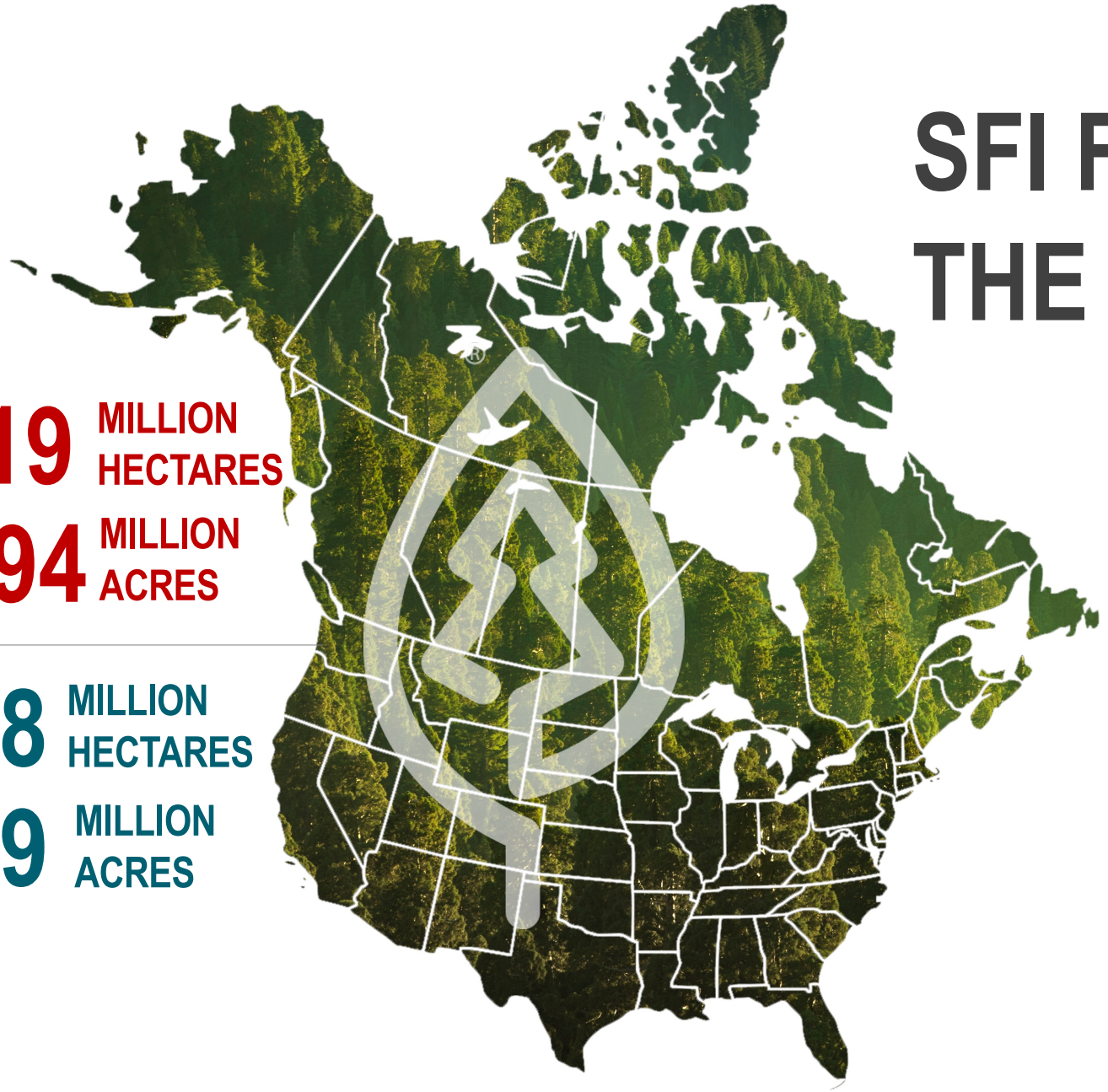
2024

SFI FORESTLAND IN THE USA AND CANADA



119 MILLION HECTARES

294 MILLION ACRES

28 MILLION HECTARES

69 MILLION ACRES

147 MILLION HECTARES / 363 MILLION ACRES

CERTIFIED TO THE SFI FOREST MANAGEMENT STANDARD

DECEMBER 2023

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KEY DOCUMENTS

Documents available for download: **forests.org/new-sfi-2022-standards-updates/**

Click here for
INTRODUCTION
SECTION 1

Click here for
SFI FOREST MANAGEMENT STANDARD
SECTION 2

Cliquez ici pour le français

Click here for
SFI FIBER SOURCING STANDARD
SECTION 3

Cliquez ici pour le français

Click here for
SFI CHAIN-OF-CUSTODY STANDARD
SECTION 4

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Click here for
SFI CERTIFIED SOURCING STANDARD
SECTION 5

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Click here for
RULES FOR USE OF SFI ON-PRODUCT LABELS AND OFF-PRODUCT MARKS
SECTION 6

Click here for
GUIDE TO THE SFI STANDARDS AND RULES
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SFI DEFINITIONS
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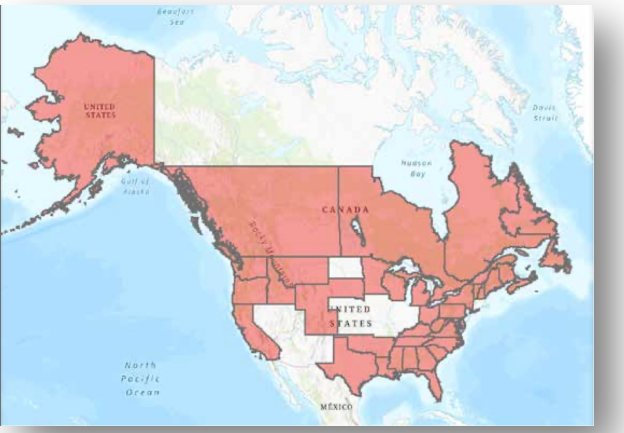
SFI TOOLS AND INTERVENTIONS

AUDITORS

- Interpretations and expectations
- Engagement through meetings, Auditors forums



SFI IMPLEMENTATION COMMITTEES

- Partners in deployment

FORESTERS AND LOGGERS

- Required training

REVISION PROCESS

~2,300 INDIVIDUALS AND ORGANIZATIONS

REGISTERED AND SUBMITTED COMMENTS on the SFI 2022 Standards

IMPLEMENTATION

- Metrics and monitoring
- Continual improvement
- Best management practices
- Guidance and tools
- Training

CONSERVATION RESEARCH, GRANTS, AND PARTNERSHIPS

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2022 STANDARDS ENHANCEMENTS

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Forest Management

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MAJOR ENHANCEMENTS IN THE SFI FOREST MANAGEMENT STANDARD ADDRESS KEY SUSTAINABILITY CHALLENGES

Working together is critical to ensuring the sustainability of our planet. People and organizations are seeking solutions that go beyond limiting negative impacts to make positive contributions to the long-term health of the planet. Sustainable forests, and products sourced from those forests, are a great tool to move towards shared sustainability goals such as climate action, reduced waste, clean water, and economic development.

SFI standards, when leveraged with our three other pillars of work–conservation, community, and education–provide practical, scalable solutions for markets and communities working to pursue this growing commitment to a sustainable planet. When companies, consumers, educators, and community and sustainability leaders collaborate with SFI, they are making active, positive choices to achieve a sustainable future.

Through SFI standards, more forests are sustainably managed, which means more effort is put into conserving healthy wildlife, providing clean water, and making more sustainable wood, paper, and packaging products available for consumers and companies. Choosing SFI is a practical choice that helps combat climate change, conserve nature, and increase the number of products in the marketplace that have a positive impact on the planet.

SFI Standards are made up of Objectives, Performance Measures and Indicators. An Objective is a fundamental goal an organization must achieve for sustainable forest management. The SFI Forest Management Standard has 17 Objectives. The SFI Forest Management Standard covers a diversity of Objectives which are highlighted on the next page.

BETTER CHOICES FOR THE PLANET

Fiber Sourcing

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MAJOR ENHANCEMENTS IN THE SFI FIBER SOURCING STANDARD ADDRESS KEY SUSTAINABILITY CHALLENGES

Working together is critical to ensuring the sustainability of our planet. People and organizations are seeking solutions that go beyond limiting negative impacts to make positive contributions to the long-term health of the planet. Sustainable forests, and products sourced from those forests, are a great tool to move towards shared sustainability goals such as climate action, reduced waste, clean water, and economic development.

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SFI Standards are made up of Objectives, Performance Measures and Indicators. An Objective is a fundamental goal an organization must achieve for sustainable forest management. The SFI Fiber Sourcing Standard has 10 Objectives and covers a diversity of Objectives which are highlighted on the next page.

BETTER CHOICES FOR THE PLANET

SFI 2022 FOREST MANAGEMENT STANDARD OBJECTIVES

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OBJECTIVE 1. FOREST MANAGEMENT PLANNING

OBJECTIVE 2. FOREST HEALTH AND PRODUCTIVITY

OBJECTIVE 3. PROTECTION AND MAINTENANCE OF WATER RESOURCES

OBJECTIVE 4. CONSERVATION OF BIOLOGICAL DIVERSITY

OBJECTIVE 5. MANAGEMENT OF VISUAL QUALITY AND RECREATIONAL BENEFITS

OBJECTIVE 6. PROTECTION OF SPECIAL SITES

OBJECTIVE 7. EFFICIENT USE OF FIBER SOURCES

OBJECTIVE 8. RECOGNIZE AND RESPECT INDIGENOUS PEOPLE'S RIGHTS

OBJECTIVE 9. CLIMATE SMART FORESTRY

OBJECTIVE 10. FIRE RESILIENCE AND AWARENESS

OBJECTIVE 11. LEGAL AND REGULATORY COMPLIANCE

OBJECTIVE 12. FORESTRY RESEARCH, SCIENCE AND TECHNOLOGY

OBJECTIVE 13. TRAINING AND EDUCATION

OBJECTIVE 14. COMMUNITY INVOLVEMENT AND LANDOWNER OUTREACH

OBJECTIVE 15. PUBLIC LAND MANAGEMENT RESPONSIBILITIES

OBJECTIVE 16. COMMUNICATIONS AND PUBLIC REPORTING

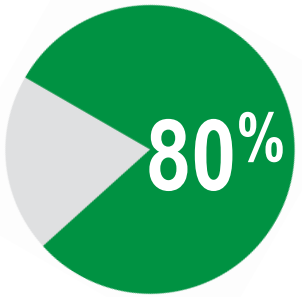
OBJECTIVE 17. MANAGEMENT REVIEW AND CONTINUAL IMPROVEMENT

$2 BILLION

DIRECTLY INVESTED IN FOREST RESEARCH BY SFI-CERTIFIED ORGANIZATIONS SINCE 1995

$83 MILLION

IN FOREST RESEARCH IN 2022



OF RESEARCH FUNDING IS LINKED TO CONSERVATION-RELATED OBJECTIVES

NO OTHER FORESTRY STANDARD HAS A RESEARCH REQUIREMENT

DISTRIBUTION OF RESEARCH DOLLARS

33%	WILDLIFE AND FISH
22%	FOREST HEALTH AND PRODUCTIVITY
13%	COMMUNITY ENGAGEMENT
4%	CLIMATE
4%	WATER QUALITY
4%	INDIGENOUS RELATIONS

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FUNDING RESEARCH: SFI CONSERVATION GRANTS, DIRECT ENGAGEMENT, AND EXTERNAL FUNDS

74 CONSERVATION GRANTS TOTALING **$4.8 MILLION**

OVER **$13.2 MILLION**

WHEN LEVERAGED WITH PROJECT PARTNER CONTRIBUTIONS

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Forests + Climate
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Realities of Climate Change:

- Increased heat waves
- Increased severity fire seasons
- Greater natural disturbance overall
- Potential to increase sector emissions
- A pressing need to reduce fossil fuel emissions

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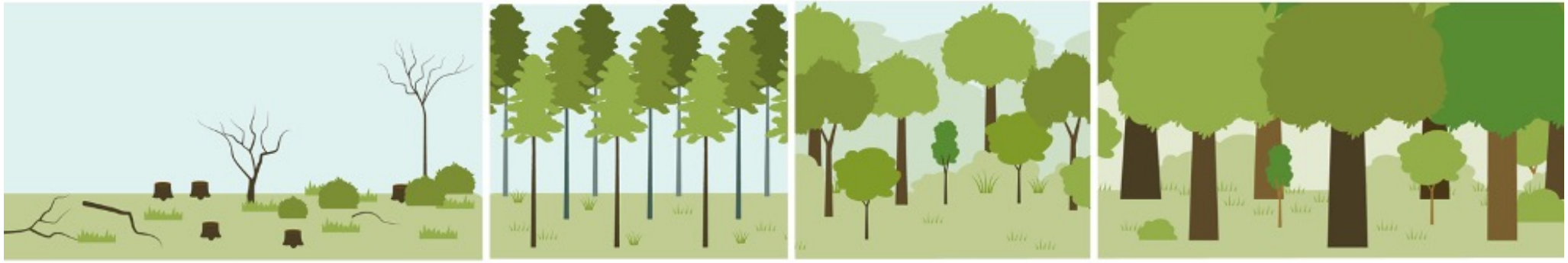
ADVANCING CSF STRATEGIES



Starting condition	Deforested / Degraded	High Intensity management	Low Intensity management	Minimal to no interventions
Carbon potential	Low storage, Low Sequestration	Low storage, med/high sequestration	Medium storage, med/high sequestration	High storage, Medium/low sequestration
Potential strategy	Afforestation / Reforestation	Improved Forest Management Reduced Impact Logging		Avoided Conversion

COOPER AND MACFARLANE, 2023. CLIMATE-SMART FORESTRY: PROMISE AND RISKS FOR FORESTS, SOCIETY, AND CLIMATE. *PLOS CLIMATE.*

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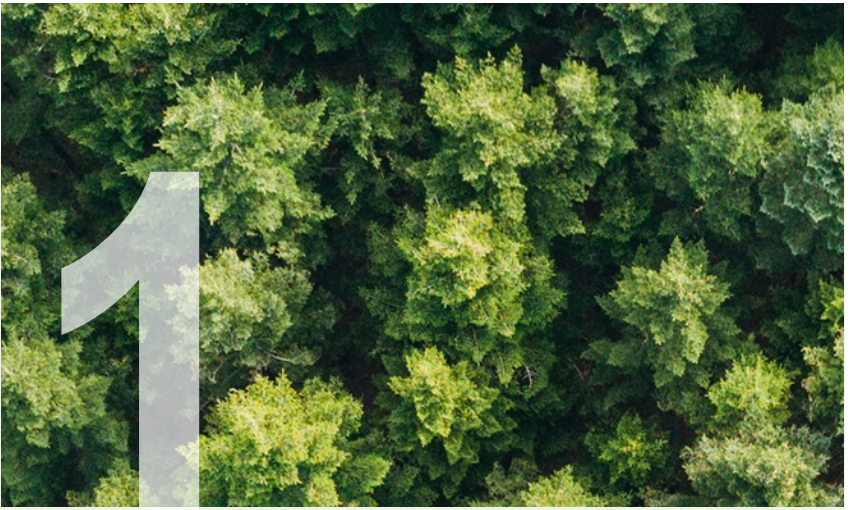
FOREST-BASED STRATEGIES FOR CLIMATE CHANGE

(MSU FCCP, 2022)



1 INCREASE OR MAINTAIN FORESTLAND

Avoiding Deforestation and increasing Reforestation

2 MAINTAIN OR INCREASE CARBON STOCKS

Changing Management Plan; Adapting to Climate Change

3 INCREASE SUSTAINBLE WOOD USE

Substituting Wood for Energy-intensive Building Materials

2 MAINTAIN OR INCREASE CARBON STOCKS

- Large and cost-effective mitigation opportunities
  - Improve resilience (avoid carbon loss)
  - Increase trees and tree age (future adapted trees, older trees and forests)
- Many can be implemented rapidly by working with current landowners
- Activities Include:
  - Forest health interventions
  - Improved forest management
  - Climate change adaptation
  - Agroforestry & Urban forestry
  - Avoiding degradation

2 MAINTAIN OR INCREASE CARBON STOCKS

CLIMATE CHANGE AS A "THREAT MULTIPLIER"

DROUGHT

- Moisture stress in trees and reduces their resistance to other disturbances (i.e., pests & diseases)

PESTS

- Warming winters provide better conditions for insect outbreaks
- Forests with high levels of insect-induced mortality have increased wildfire risk

FIRE

- Burned stands loss carbon immediately and over time


EXAMPLE: OAK DECLINE


EXAMPLE: CATASTROPHIC FIRE (USFS)

Image: Joseph OBrien, USDA Forest Service, Bugwood.org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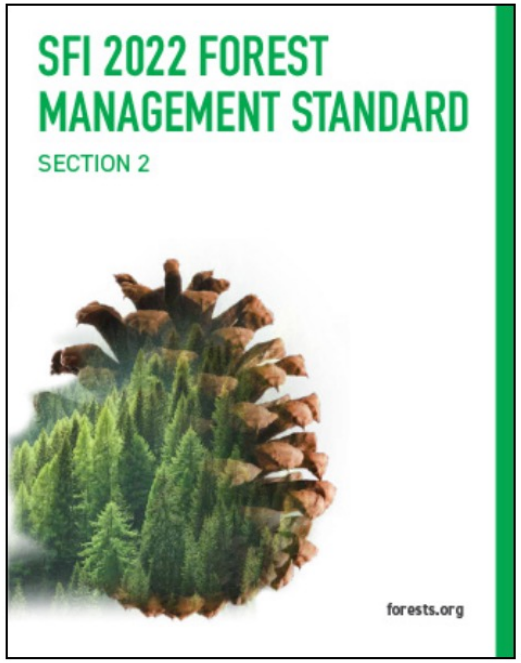
SFI STANDARDS SUPPORT CLIMATE-SMART FORESTRY

The SFI 2022 Forest Management Standard contains new climate-smart forestry objective that requires forest managers to identify climate change risks and tackle them through reducing emissions from their operations or increasing carbon capture.



Identify and address climate change risks to forest and forest operations and the development of adaptation objectives and strategies.

Identify and address opportunities to mitigate effects associated with its forest operations on climate change.

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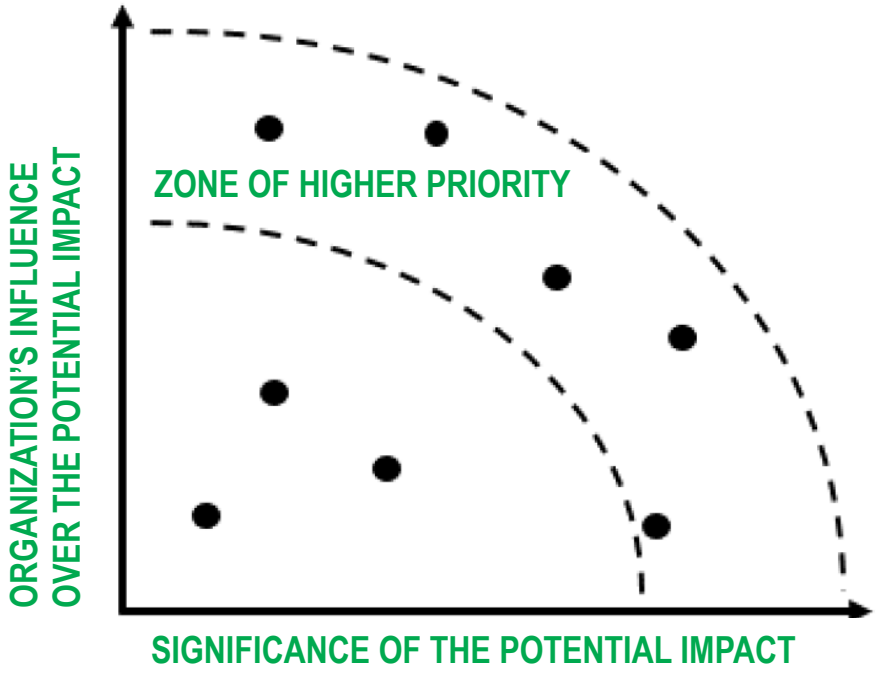
CLIMATE SMART FORESTRY

GUIDANCE: INDICATOR 9.1.1 – PRIORITIZATION OF RISKS AND VULNERABILITIES

- Determining climate-related material risks (environmental, social, and economic climate-related risks and vulnerabilities).
- Develop a short-list of topics that inform forest management strategies, targets, operations and reporting.
- Considering the nature of the impacts – positive or negative, actual or potential, direct or indirect, short-term or long-term, or intended or unintended.
- Consideration of the significance of the potential impact and the level to which the impact can be influenced.



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CLIMATE SMART FORESTRY

GUIDANCE: INDICATOR 9.2.1. – ENHANCING CLIMATE BENEFIT

Identify and address opportunities to enhance the climate benefits associated with forest management operations

INDICATOR 9.2.2.

Based on best scientific information, Certified Organizations shall identify and address opportunities to enhance ecosystem resilience for the forests they own or manage

a. prompt reforestation or planned natural reforestation as per Indicator 2.1.1;
b. adequate regeneration and appropriate actions to correct understocked areas, and
c. evaluation for afforestation of areas that are not ecologically important, and
d. protection of desirable or planned advanced regeneration during harvest and the retention of vigorous trees during partial harvest.

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SFI IMPLEMENTATION COMMITTEE (SIC) REGIONAL WORKSHOPS ON CSF

SUSTAINABLE FORESTRY INITIATIVE IMPLEMENTATION COMMITTEE
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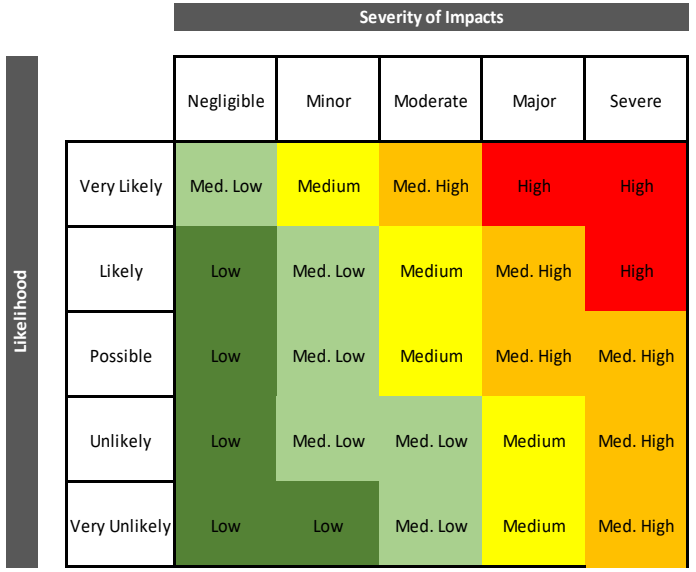
Regional workshops held – facilitated by experts on climate science and adaptation

- Northeast, June 28 2022
- Lake States on August 24 2022
- Southeast on September 29 2022
- Central Canada/Quebec, December 8 2022
- Pacific Northwest, January 31 2023
- BC (Western Canada) – April 4 2023
- Prairie (Western Canada) – April 13 2023



Used a risk management framework to identify priorities

- ***Risk*** *= the probability of an event multiplied by some measure of its consequence*

USDA Climate Hubs U.S. DEPARTMENT OF AGRICULTURE

NIACS Northern Institute of Applied Climate Science

FPInnovations

CLIMATE SMART FORESTRY

GUIDANCE

- Resources for developing risk assessments and adaptation plans.
- Collaborative efforts for addressing climate change risks.
- Options for addressing stored carbon and greenhouse gas emissions.

SFI IMPLEMENTATION COMMITTEE PLAYBOOK
CLIMATE SMART FORESTRY
Updated July 7, 2022

INTRODUCTION TO SIC PLAYBOOKS

The requirements of the 2022 SFI Standards for Forest Management and Fiber Sourcing introduce new opportunities for engagement and collaboration via the SFI Implementation Committees (SICs). These opportunities focus on new or enhanced elements of the SFI Standards including Climate Smart Forestry, Fire Resilience and Awareness, and Conservation of Biodiversity (Forests of Exceptional Conservation Value - FECVs). In a recent survey conducted by SFI, an overwhelming majority of SFI certified organizations indicated interest in collaboration via the SICs on these requirements.

In response, SFI is developing a set of *SIC Playbooks* that provide resources and actionable tips for SICs. The SIC Playbooks draw from and build on the resources and information provided in the SFI Standard Guidance but go further in outlining specific steps and resources that could be mobilized by SICs. In addition to this SIC Playbook on Climate Smart Forestry (2022 Forest Management, Objective 9), an SIC Playbook on Biodiversity in Fiber Sourcing (2022 SFI Fiber Sourcing, Objective 1) is also available. A Playbook on Fire Resilience and Awareness (2022 Forest Management Objective 10) is in development. Others may also be developed in response to needs and requests of SICs.

An Iterative Tool: Please Send Us Your Feedback + Suggestions

In response to growing interest, this Climate Smart Forestry SIC Playbook is released as a resource that SICs can begin using immediately. However, it is a tool that will be refined as it gets utilized. SICs and certified organizations are encouraged to let the SFI team know what is helpful and what could be improved. We are also seeking suggestions for the best regional resources, as well as ideas and best practices that your SIC has identified in implementing the Climate Smart Forestry SIC Playbook in your region, state or province. Please provide feedback and suggestions to Nadine Block, SFI Senior VP Community and Government Relations, at nadine.block@forests.org.

SICs offer a venue in which SFI-certified organizations can collaboratively undertake high leverage activities to meet SFI certification requirements in a cost efficient, expeditious and mutually beneficial way. Activities conducive to such collaboration constitute focal areas within the SIC Playbooks and tend to focus on shared resources, tools and services that can be modified and/or deployed in the context of an SFI-certified organization's specific operations. Activities that lend themselves to such collaboration may include but are not limited to:

- Gathering and analyzing best scientific information: Includes biological and other datasets; legislation, policy, and planning documents; academic research; etc.
- Engagement in or support of research: Research can have benefit for the collaborating SFI-certified organizations in a "pre-competitive" fashion.
- Identifying best practices: SICs can draw on the experiences and knowledge of SFI-certified organizations to identify and mutually share best practices that can be implemented in the context of SIF certified operations.
- Development and presentation of educational and informational materials: Audiences may include wood producers, loggers, foresters and others.

ASSESSING THE TRADEOFFS: WHERE SHOULD AN SIC FOCUS?

Many SICs support a range of important ongoing functions. With the introduction of the SFI 2022 Standards and new opportunities for collaboration on Climate Smart Forestry, Biodiversity/FECVs, and Fire Resilience/Awareness, SICs are encouraged to review their existing activities, along with new opportunities for collaboration, to assess tradeoffs and identify priorities for the SIC over a given timeframe.

CLIMATE SMART FORESTRY SIC PLAYBOOK

While many SFI certified organizations have been implementing forest management with an eye toward climate for years, specific elements to address Climate Smart Forestry are entirely new with the 2022 SFI Forest Management

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SYNERGISTIC PRACTICES

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 vigor
- Thinning – increased water/nutrient/sunlight availability
- Thinning – avoids emissions from disturbance
- Soil protection to maintain/conserve soil carbon
- Slash distribution – maintain/increase soil carbon
- Fertilization – improved establishment success and growth rates.

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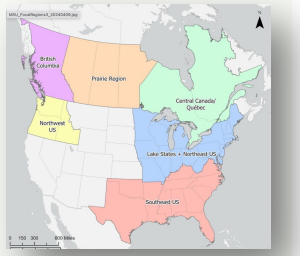
COLLABORATIONS TO ADVANCE CSF

MSU FCCP



Assessing approaches for climate change adaptation and mitigation across North America

- Analyze the Climate Smart Forestry regional workshop reports summarizing findings from the seven regional CSF workshops
- Literature-driven regional matrices of forest type, climate concern, and CSF practices, by eco-region
- Leveraging frameworks from NIACS
- Results in Summer 2024

CSF Decision Support Tool Hierarchy

Region — Subregion — ForestType — Species — Threat — Strategy — Approach — Tactic

MICHIGAN STATE UNIVERSITY
Department of Forestry
Forest Carbon and Climate Program

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NIACS
Northern Institute of Applied Climate Science

MANOMET AND MAINE TREE

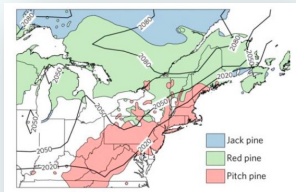
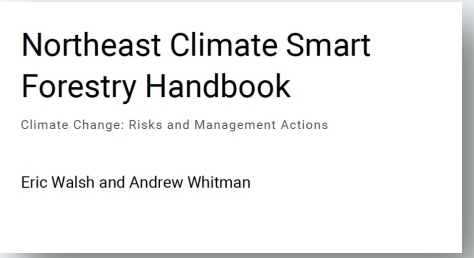


Figure 1. The year of southern pine beetle suitable climate emergence and the range of the dominant forest type defined by pine species. Image reproduced from Lesk et al. 2017[14].

Climate Smart Forestry Manual

Northern New England, New York, and the Maritime Provinces of Canada

- Designed for institutions, forest managers and certification managers
- Exploring next steps with field learning sites and SICs
- Forthcoming



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Maine TREE Foundation

SUSTAINABLE FORESTRY INITIATIVE NEW YORK
SFI-01237

SUSTAINABLE FORESTRY INITIATIVE NEW HAMPSHIRE
SFI-01135

SUSTAINABLE FORESTRY INITIATIVE VERMONT
SFI-01147

SUSTAINABLE FORESTRY INITIATIVE MAINE
SFI-01125

In Development: Indicators and Best Management Practices

Topic	BMP
Hydrology and precipitation	Changes to larger culverts or bridge structures to accommodate higher peak flows and flood conditions, where ecologically appropriate with respect to the spread of native and invasive species which may affect Indigenous peoples' rights and traditional practices.
Fire	Changes to road layout and design to resist washouts from floods, or to create systemic fire breaks.
Management schedule	Modifications to harvest scheduling and locations to reduce climate impacts during shifting seasons (e.g., avoidance of wet spring conditions, with increased risks of rutting and losses to soil carbon).
Indigenous Knowledges	Engagement with Indigenous rights-holders, knowledge holders, and land-users to understand traditional land-use and stewardship practices, and the extent to which any form of ecosystem modification may be appropriate.
Future-adapted species	Assisted tree migration through selective planting to give preference to species that will thrive in anticipated future conditions, in a manner that avoids or minimizes adverse impacts to Indigenous peoples' rights and traditional practices.
Silviculture	Development of new silvicultural techniques to accommodate altered growing conditions.

ECCC NATURE SMART CLIMATE SOLUTIONS FUND

Environment and Climate Change Canada
Environnement et Changement climatique Canada

Climate Smart Forestry (CSF) in Forest Management across Canada
Phase I: 2024-2027

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FPAC.ca
APFC.ca

MIISUN
INTEGRATED RESOURCE MANAGEMENT COMPANY

UNIVERSITY OF ALBERTA

OBJECTIVE:
Reduce Canada's net GHG emissions using climate smart forestry (CSF) practices and strategies in a sector-based approach across large-scale industrial organizations and Indigenous forest-decision-makers.

TOTAL PROJECT: $6,151,550 CAD
CURRENT STATUS: Approved at agency level (March 2024)

KEY ACTIVITES:
Strategy I: Prioritize and interpret climate risk and opportunity
Strategy II: Develop science-based Best Management Practices (BMPs) for CSF
Strategy III: Workshop BMPs with experts, partners, forest managers, and decision-makers
Strategy IV: Establish metrics to track efforts and measure success
Strategy V: Pilot, Assess, and Measure – with a focus on Indigenous partners
Strategy VI: Communicate results and scale outputs


THANK YOU
Contact
Lauren.cooper@forests.org
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