SFI CONSERVATION GRANT
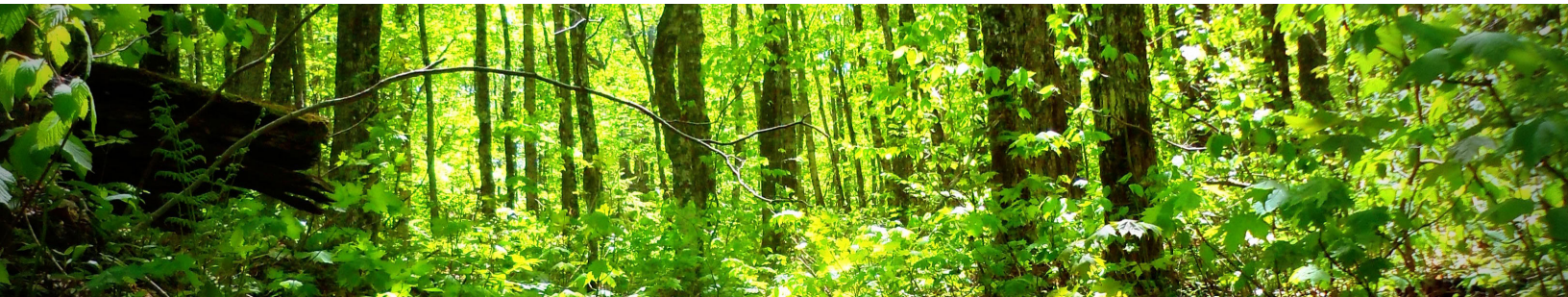# EXPLAINER

Maine **TREE** Foundation | **SUSTAINABLE FORESTRY INITIATIVE** SFI-00001

SFI 2022 FOREST MANAGEMENT STANDARD AND CLIMATE SMART FORESTRY IN THE NORTHEASTERN UNITED STATES AND MARITIME CANADA

Project Lead	Maine TREE Foundation
Awarded	2021-2024
Location	United States: Maine, New Hampshire, Vermont, New York Canada: New Brunswick, Nova Scotia, Prince Edward Island
Partners	Manomet Climate Smart Land Network (CSLN) Maine SFI Implementation Committee (SIC)

With funding from SFI, Maine TREE Foundation produced a professional guidance manual detailing regional Climate Smart Forestry in New England, Atlantic Canada, and New York and alignment with the SFI 2022 Forest Management Standard.

KEY POINTS

- Offers Climate Smart Forestry actions for sustainable forestry topics based on extensive literature review and survey responses from practitioners.

- Provides supplementary information and examples of voluntary actions focused on key climate change risks identified by foresters.

WHY IT MATTERS

Forests across the United States and Canada are increasingly impacted by a changing climate, including rising temperatures, shifting precipitation patterns, and more frequent extreme weather events. Climate Smart Forestry (CSF) offers a proactive approach to integrate climate adaptation and mitigation strategies into forest management decision making. Effectiveness, however, requires regional specificity and overcoming gaps that may exist between scientific research and landowner knowledge. Maine Timber Research and Environmental Education (Maine TREE) Foundation led a collaborative effort, with input from forest managers and certification experts, to identify regional risks and sustainable forest management actions to be considered in the context of CSF. The resulting published manual is publicly available for use by SFI-certified organizations and the broader forestry sector in this geography.

PROJECT DESCRIPTION

OBJECTIVES AND METHODS

In 2021, the Maine TREE Foundation project team developed a CSF manual for the Northeast states and Atlantic Provinces. The project team conducted an in-depth literature review of regionally relevant studies to describe and identify the risks associated with climate change and an assessment of large-scale climate impacts for the region. Researchers also developed and delivered targeted surveys designed for forest managers and certification managers of SFI-certified organizations. Additionally, researchers attended regional SIC meetings to gain insights about how SFI-certified organizations are approaching climate change risks, and to learn about practices they are using or are willing to use to adapt to or mitigate impacts associated with climate change. SFI-certified organizations were recruited for an advisory committee to review the content and their final findings.

RESULTS AND OUTCOMES

The project team published their results in a manual designed to provide practical guidance for implementing CSF in the Northeastern U.S. and Atlantic Canada. The manual covers two key areas:

1. identification of climate change risks in the region and;
2. implementing CSF actions to mitigate the negative impacts of climate change.

Section I presents the regional climate change impacts that were identified from a literature review. Section II of the manual, oriented toward certification managers, explores 17 key topics from the SFI 2022 Forest Management (FM) Standard, highlighting actions that support forest resilience, productivity, and climate mitigation.

Section III of the manual, written for forest managers, presents climate-related risk factors identified in survey results and literature reviews, along with assessments and projections for affected forest types.

Section IV of the manual, also directed to forest managers, outlines actionable management practices aligned with climate smart forestry, offering strategies drawn from both survey responses and scientific research to support adaptive forest management. This section highlighted various forest management strategies to support climate adaptation and mitigation, including:
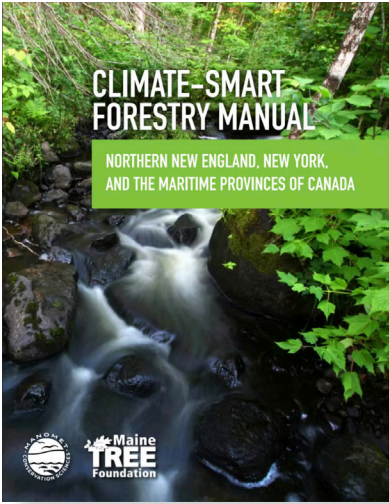
FOREST MANAGEMENT STRATEGY	GOAL
Thinning and Density Management	Reduce drought and pest vulnerability, improve regeneration, and balance carbon storage
Compositional and Structural Diversity	Improve resilience to climate stressors and support long-term ecosystem services, in part through enhanced species and genetic diversity
Harvest Interval Adjustment	
Lengthened rotations	increase standing carbon and support climate mitigation
Shortened rotations	reduce disturbance exposure (but can lower productivity and ecological integrity)
Monitoring Tools	encourage use of LiDAR, remote sensing, and eDNA for tracking carbon stocks, biodiversity, and pest/pathogen activity
Carbon Accounting	integrate forest carbon models and inventory updates to support mitigation planning and offset opportunities

HOW THE PROJECT HELPS FOREST AND CERTIFICATION MANAGERS

The results of this project serve as a practical resource for integrating climate smart principles into forest planning and operations, supporting both certification compliance and long-term forest health. For certification managers, section II of the manual is structured around the SFI 2022 FM Standard itself, evaluating how each objective may be impacted by climate change and how CSF principles can be integrated. For forest managers, sections III and IV focuses on regionally significant climate risks and outlines practical management actions. The manual also highlights CSF practices that may not be explicitly labeled as such in existing literature, helping to clarify and expand understanding of climate-informed forest management.

HOW IT RELATES TO THE SFI STANDARDS

The SFI 2022 Forest Management Standard Objective 9 (Climate Smart Forestry) directs certified organizations to identify and address climate change risks, opportunities to mitigate effects, and develop appropriate adaptation objectives and strategies. The manual can help certified organizations address explicit requirements of Objective 9. This manual also presents forest managers with appropriate actions to consider other SFI FM Standard objectives that address interrelated topics that include forest health, productivity, biodiversity, and other valued ecosystem services.

Additionally, development of this manual was supported by the Maine SFI Implementation Committee (SIC), which plays a pivotal role in promoting responsible forestry within its region. By contributing to this resource, the Maine SIC strengthens the capacity of SFI-certified organizations to meet the requirements of Objective 9 on Climate Smart Forestry—underscoring the essential role SICs play in fostering climate resilience and sustainable forest management.

Objective 9. Climate Smart Forestry

To ensure forest management activities address climate change adaptation and mitigation measures

Performance Measure 9.1 Certified Organizations shall individually and/or through cooperative efforts involving SFI Implementation Committees or other partners identify and address the climate change risks to forests and forest operations and develop appropriate adaptation objectives and strategies. Strategies are based on best scientific information.

Performance Measure 9.2 Certified Organizations shall individually and/or through cooperative efforts involving SFI Implementation Committees or other partners identify and address opportunities to mitigate the effects associated with its forest operations on climate change.

RESOURCES

Climate-Smart Forestry Manual: Northern New England, New York, and the Maritime Provinces of Canada (available for public download at: (https://www.mainetree.org/product-page/northeast-climate-smart-forestry-manual)

SFI 2022 Forest Management Standard

SFI Climate Smart Forestry