

# The Role of Forests in Climate Change



**Environment  
Northeast**

Changes in global and regional climate patterns represent one of the greatest threats to our environment and economy. Because forests store or sequester large amounts of carbon in trees and soils, they play a key role in the implementation of meaningful climate change solutions in Maine and the region.



Options to increase carbon storage in forests include protecting forest lands and reducing the conversion of forest lands to development. However, the overwhelming proportion of forested land in Maine, as well as for and northern New England and Eastern Canada, is harvested for the forest products industry, a key part of Maine's economy. As a result, Environment Northeast, in partnership with the Maine Forest Service (MFS), US Forest Service (USFS), and in growing collaboration with other non-profit and private entities, is focusing on how forest management strategies can increase terrestrial carbon sequestration to advance state and regional climate change action plans while conserving and expanding forest ecosystem co-benefits. The goal of our project is twofold: (i) to identify forest management practices that increase carbon

sequestration and reduce forest emissions; and (ii) to recommend incentive programs and regulatory frameworks that make it feasible and profitable for forest owners to adopt carbon-friendly management practices and participate in emerging carbon markets. There are many ecological and economic benefits to providing sequestration services, but many landowners are not yet able or ready to implement them. Environment Northeast is working to address landowners' concerns and the challenges they face, so that the region can move forward with appropriate and relevant carbon sequestration policies and climate change solutions.

## **Research**

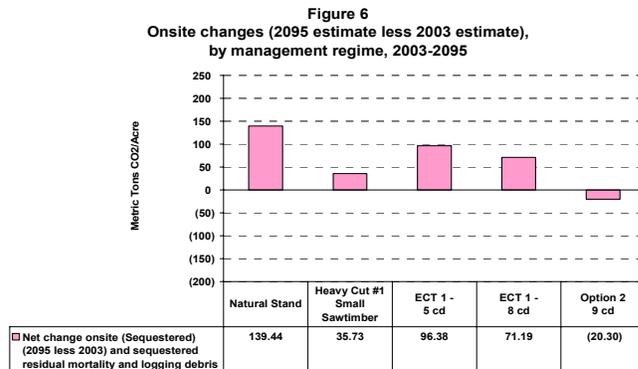
In partnership with the Maine Forest Service (MFS) and US Forest Service (USFS), Environment Northeast is conducting a study in Maine to explore the biological potential of the Northern hardwood forests to sequester carbon through a variety of forest management and silvicultural practices, and to determine the potential for carbon markets to provide enhanced and diversified revenue streams to Maine landowners. Our joint project is refining our understanding of the carbon flow in both onsite biomass and off-site wood products due to these various forest management practices while identifying potential financial incentives to encourage landowners to adopt practices that maximize greenhouse gas reduction benefits.

## Developing and Implementing Policy

Environment Northeast's efforts to develop and refine policies that would increase forest carbon sequestration are tied to our work encouraging the development of emerging carbon markets.

Environment Northeast is a lead stakeholder in the Regional Greenhouse Gas Initiative (RGGI) process

where we are working on the criteria for carbon offset projects to qualify in RGGI. With MFS and other non-profit partners, including The Pinchot Institute for Conservation and The Trust to Conserve Northeast Forestlands, we are expanding our work developing forest sector policies and protocols in Maine that support both private and public climate planning efforts in the state. Our goals include facilitating on-the-ground pilot projects designed to test model forest management regimes; develop, forest certification-based



ENE-MFS Phase I Report: Analysis of changes in carbon sequestered due to differing harvest cuts

verification and auditing standards; and refine RGGI and non-RGGI-based carbon offset protocols. ENE will use this information to develop forest carbon policies for implementation in Maine and potentially for replication throughout the region.

## Outreach

Maine is a critical state in which to conduct this work, due to the large amount of forested lands, the need to develop programs that both enhance forest ecosystems while seeking new revenue and markets for Maine forest products and the engagement by private and public interests. Environment Northeast has strong relationships with state policy makers and members of forest non-profit organizations. We will also conduct an outreach initiative with key state and federal agencies, forest industry and non-profit organizations to develop an accurate forest sector greenhouse gas inventory and to help build the framework for expanding forest carbon sequestration policies throughout the region. Our work is already being transferred to other states and regions through a national network of leading state and regional groups working on key policies to reduce greenhouse gas emissions in their regions, including Ohio, the Dakotas, Iowa, Minnesota, Montana, Wyoming, Wisconsin, North Carolina, Georgia, Tennessee and Florida.

Environment Northeast has been a leader in developing state and regional policies that reduce greenhouse gases. We create solutions that are cost-effective, receive broad stakeholder support, and yield measurable improvements in air quality and emissions levels.



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Environment Northeast is a nonprofit research and advocacy organization focusing on the Northeastern United States and Eastern Canada. Our mission is to address large-scale environmental challenges that threaten regional ecosystems, human health, or the management of significant natural resources. We use policy analysis, collaborative problem solving, and advocacy to advance the environmental and economic sustainability of the region.