

# Summary Sheet

## Forest Guild Report: “Climate Change, Carbon, and the Forests of the Northeast”

Report released in December 2007; available at: [www.forestguild.org/news/climatechange](http://www.forestguild.org/news/climatechange)

Contact:

Bob Perschel, Forest Guild Northeast Region Director – 508.756.4625 [bob.perschel@verizon.net](mailto:bob.perschel@verizon.net)

Dr. Zander Evans, Forest Guild Research Director – 505.577.1592 [zander@forestguild.org](mailto:zander@forestguild.org)

### New Forest Guild Report: How Northeast Forests Capture Carbon, Fight Climate Change

The Forest Guild’s report “Climate Change, Carbon, and the Forests of the Northeast” marks the first time that climate change impacts, carbon policy recommendations, and forest management challenges in the Northeast have been interconnected and distilled into practical, attainable strategies for use by forest managers. The report serves as a science-based and practical guide for policymakers and elected officials who are charged with developing policies for overall carbon dioxide reductions and establishing specific standards for carbon sequestration activities, particularly forestry. In addition, the report serves as a practical guide for foresters responsible for managing forests to be resilient in the face of climate change and for maximizing carbon sequestration on managed forestlands. Highlights of the report’s findings are summarized below.

#### **Climate change is altering the forests of the Northeast:**

- Plant and animal ranges are shifting northward as climate warms.
- Changes in habitat suitability will be more rapid than historical rates of change.
- Climate disruption favors invasive species.
- Species richness may increase while endangered species suffer.
- Disturbance regimes will intensify and may be more important than the direct effects of climate change.
- Changes to insect and pathogen patterns will have both positive and negative impacts.
- Enhanced carbon cycle models are needed to better predict the effects of forest management practices on carbon sequestration.

#### **Current carbon trading programs and protocols for forestry:**

- Current U.S regulatory framework is in a state of flux. State and regional efforts initiated include:
  - California Climate Action Registry
  - Western Climate Initiative
  - Georgia Carbon Sequestration Registry
  - Midwest Regional Greenhouse Gas Accord
  - Northeast Regional Greenhouse Gas Initiative
  - Climate Registry
  - Chicago Climate Exchange
  - Over-the-counter markets

**Policy recommendations for climate change and carbon storage:**

- Retain the Northeast's forestlands as forests.
- Include appropriate forest management projects as legitimate carbon offsets.
- Include standards for excellent forestry in criteria for earning and trading carbon credits.
- Augment current programs to better regulate harvesting, enhance landowner education and incentives, and utilize the skills of licensed foresters.

**Forest management recommendations for climate change:**

- Foresters must now manage for fundamental changes to environmental conditions within one or two rotations.
- Silviculture is the primary tool for keeping forests as healthy as possible.
- It may now be preferable to focus on future desired forest functions rather than aiming for specific species mix.
- Shifting habitats are likely to manifest themselves as declines in species at the edge of current ranges.
- Managers can increase forest resistance, resilience and adaptation by:
  - Using natural disturbance as a guide.
  - Maintaining natural communities.
  - Protecting against exotic invaders.
  - Preserving soil productivity.
  - Maintaining and expanding forest reserves.

**Forest management recommendations for carbon storage:**

- Use forest management plans and professional foresters to guide harvests.
- Grow trees longer and extend the time between harvests to promote carbon storage and ecological values.
- Manage forests for structural complexity by growing trees of varying sizes and ages.
- Retain trees as biological legacies after harvests by allowing some trees to continue to grow after their companions have been harvested.
- Use low-impact logging—smaller scale, better adapted equipment and better planned harvest strategies—to protect soil and site productivity.
- Choose appropriate thinning techniques to concentrate growth on fewer, larger trees.
- Restore under-stocked stands to full stocking to take full advantage of the site's productive capacity and potential to sequester carbon.
- Avoid harvesting practices that degrade ecosystem health.
- Maintain forest reserves for carbon sequestration, genetic diversity, and habitat refuges.
- Consider carbon storage potential as an additional benefit when evaluating the creation of future reserves.
- Consider introducing forest management to accelerate carbon accumulation in reserves now in unhealthy or undesirable conditions.