PINCHOT INSTITUTE
FOR CONSERVATION

Forest Carbon Sequestration in the Northeastern U.S.

Workshop Summary

On February 9-10, 2006, the Pinchot Institute for Conservation convened a workshop in Washington, D.C. to explore strategies for carbon sequestration in the forestry sector of the Northeastern U.S., with an initial focus on the states of Maine, Pennsylvania, and Wisconsin. The workshop was attended by the State Foresters of the three pilot states and 30 foresters, landowners, policymakers, businesses and conservation organizations. Following is a summary of the key concepts and findings that came out of the workshop.
The objectives for the workshop were four-fold:

1. Clearly articulate the goals and purposes in developing a carbon forestry protocol in the Northeast, from the perspectives of state government, private forest landowners, conservation organizations and others.
2. Critically examine the processes and lessons learned in early efforts like those in California.
3. Understand the current state of knowledge about both the opportunities and challenges of designing a scientifically sound, politically feasible, and financially practical protocol for Northeastern forests, using Maine, Pennsylvania and Wisconsin as test cases.
4. Determine how best to proceed with the development of processes and mechanisms that go far enough to stimulate technological change and prepare Northeastern forest landowners to benefit in a carbon-constrained world but that do not go beyond what can be justified in the current fluid scientific, technical and political environment.

The State Foresters of Maine, Pennsylvania, and Wisconsin, summarized the "lay of the land" of the forestry sector in each of their states. They discussed forest cover, landowner demographics, and forestry practices and products, in order to orient participants to the unique challenges for implementing sequestration projects in each state. They also identified the primary threats to their states' forests and forest industries, which helped to convey the importance of recognizing additional values that may help sustain forestlands. The threats include high land costs and the associated financial challenges of investing in good management; parcelization and fragmentation of forest land; invasive species; and the imminent transfer of non-industrial private forest lands due to the advanced age of current owners. The presentations emphasized that each state has unique characteristics and challenges; however, a common theme emerged with each state's desire to maintain viable working and well-managed forests.

There was no consensus on how carbon sequestration could assist each of the State Foresters in their efforts to maintain viable working forests but there was agreement that it was an option that should be explored further. Each State Forester indicated that public sources of capital to encourage long-term forestry and well-managed forests are very important and effective but that they are limited and insufficient for the current and emerging challenges. The State Foresters were particularly interested in better understanding the potential for private capital to provide resources for forest management and expressed their interest in payments for carbon sequestration as one way to tap into such capital sources.

The workshop presentations by the Environmental Protection Agency and the Sampson Group and the subsequent discussion indicated that the region's forests can contribute to the reduction of atmospheric greenhouse gases but that the opportunities are limited compared to other activities and other regions of the country. A collaborative research effort between the Sampson Group, the Nature Conservancy, and Winrock International is analyzing the sequestration potential of Northeastern forests in more detail. Their final report will be available in December 2006.

In addition to biological limitations, the regulatory framework might limit the participation of landowners. For example, at this time, the Regional Greenhouse Gas Initiative (RGGI) allows a limited number of offsets for up to 3.3% of a generator's total emissions, with afforestation being the only forestry-related offset currently allowed. Early indications suggest that afforestation is not a significant opportunity in the Northeastern region. RGGI is expected to consider other forestry options in the future but at this time they are not part of the program.

Participants also discussed the implication of RGGI's design for the potential of carbon offset opportunities in the Northeast. A presentation on RGGI included discussion of the Memorandum of Understanding (MOU) among the participant states. The MOU favors projects in signatory states, however, it also includes *safety valves* through a provision that lifts this preference once a set average regional price of CO_2 is exceeded. The effect of these safety valves on opportunities for offsets in RGGI-driven markets, and the relative competitiveness of Northeastern landowners cannot be predicted.

A review of the experience of California's forest protocol by the Pacific Forest Trust demonstrated that the protocol focuses on project-level offsets and requires rigorous measurement and monitoring and evaluation. The level of rigor creates significant transaction costs, which would be compounded in the Northeast, which covers a large area with diverse forests and forest practices. This suggests that the diverse nature of forests and forest practices in the Northeast might make it difficult to develop a project-level protocol that meets the needs of the entire region.

Discussion highlighted the fact that, in the three pilot states, the greatest opportunity in terms of total area of forestland is for non-industrial private forest (NIPF) landowners. The opportunities presented by NIPFs are complicated by their dispersed and relatively unorganized nature. Workshop attendees generally agreed that any effort to produce marketable carbon offsets would require an entity that can aggregate offsets from many different NIPFs in order to reduce transaction costs and to produce a sufficient quantity of marketable credits.

The transaction costs associated with forestry offset projects were discussed in detail. There is a continuum from the most rigorous and accurate forestry offset projects to more flexible and therefore less marketable projects. One idea that came out of the workshop was the potential to focus on "programmatic greenhouse gas (GHG) reductions" rather than emissions offsets from specific projects. The former's GHG effects are credited to a large-scale entity's (e.g., a state) GHG accounting but not to the account of any specific landowner or emitter. This type of approach could take some of the burden off of specific forestry projects and create an opportunity for offset aggregation.

A programmatic approach is also one way to address some of the transaction costs and the dispersed and unorganized nature of NIPFs. Each state has an array of delivery systems for existing programs that might serve as good models for a carbon forestry initiative. For example, Wisconsin has an impressive delivery system in place to certify private forest lands as sustainably managed. At the Federal level, carbon accounting rules, guidelines, and reporting mechanisms such as the 1605(b) program might provide a good model to guide development of a programmatic protocol.

The Nature Conservancy's early carbon sequestration efforts provided some sobering information on the challenges of forestry and carbon sequestration. Their presentation demonstrated that forestry carbon projects require significant up front investments and that it is very risky to develop projects based on the expectation of the development of a specific policy or market environment. Their experience has led them to begin considering the opportunities associated with program-level rather than project-level initiatives.

The programmatic approach poses challenges for offset measurement and monitoring and verification. The current policy environment favors offsets from projects and does not provide a reporting option for programmatic offsets. With the programmatic approach, it remains unclear how specific on-the-ground management decisions would translate into marketable carbon credits that could be sold in a market-based trading platform. Any program would have to be designed to produce carbon credits of sufficient quality that they could be aggregated and sold on the open market.

Participants were intrigued by the promise of long-lived wood products as carbon reservoirs and with how they might serve as carbon offsets. This raised several issues relating to questions of ownership of carbon along the value chain and the measurement of carbon in long-lived products. Other questions arose around ownership of the "bundle of rights" associated with a forest throughout its associated value chain. For example, there is currently no legally defined "carbon right" but this right could presumably be "unbundled" as a right and a product.

The recurring interest among the states for approaches that help sustain forests and associated values spurred discussion on how carbon can be recognized as part of a portfolio of assets for which the landowner is compensated. The role of carbon as a co-benefit or support for other values of forest ecosystems was also emphasized in the presentation by the Nature Conservancy. The discussion on programmatic approaches included in the potential inclusion of carbon as one component of a packaged approach to help maintain forest ecosystems and facilitate better management of forestlands.

In conclusion, the workshop participants considered the latest practice and thinking on the role of forests in mitigating the emissions of greenhouse gases in the Northeast. In the region, the greatest opportunities appear to be in a strategy that engages non-industrial private forest landowners, who own the majority of forest land in the region. Such a strategy would likely focus on a program-level approach with entities that can aggregate offsets that could be sold to any carbon market that develops. This strategy would take advantage, to the extent possible, of existing state and/or federal programs but would be paid for by accessing private capital markets in exchange for carbon credits. This would require an initial up front investment to establish a program. Finally, the strategy would need to incorporate credible answers to questions regarding the storage of carbon in long-lived wood products and how to address the ownership of carbon from stump to final product.

Workshop Participants

Name	Organization
Andrasko, Ken	U.S. Environmental Protection Agency
Birdsey, Rich	U.S. Forest Service
Bisson, Keith	Pinchot Institute for Conservation
Bushinsky, Joshua	Pew Center on Global Climate Change
Cant, Jessica	U.S. Forest Service
Daviet, Florence	World Resources Institute
Delong, Paul	Wisconsin DNR Division of Forestry
Fledderman, Bob	MeadWestvaco
Friend, Alex	U.S. Forest Service
Gentry, Brad	Yale School of Forestry and Environmental Studies
Giffen, Alec	Maine Forest Service
Grace, Jim	Pennsylvania Bureau of Forestry
Hausker, Karl	Pennsylvania Environmental Council
Manion, Michelle	NESCAUM
Lichtenfels, Michelle	Environment Northeast
Lucier, Al	NCASI
McNulty, John	Orion Timberlands
Kant, Zoe	The Nature Conservancy
Murphy, Mike	U.S. Forest Service
Passero, Michelle	Pacific Forest Trust
Peterson, Tom	Climate Change Strategies
Price, Will	Pinchot Institute for Conservation
Puller, Blaine	Kane Hardwoods
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Sample, Al	Pinchot Institute for Conservation
Sampson, Neil	Sampson Group
Shideler, John	NSF-ISR
Sosland, Dan	Environment Northeast
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