

[Renewable Resources](#)[Ales](#)**FILS #65**

**Brian Murray**, Director for Economic Analysis, Nicholas Institute for Environmental Policy Solutions and Research Professor of Environmental Economics, Nicholas School of the Environment, Duke University, was the next speaker for the 65th Forest Industry Lecture on **10 March 2011**.

**"The Economics of Forests as a Climate Mitigation Strategy: Global Opportunities and Challenges"**

**Abstract:** The world's forests and global climate system are inextricably linked through the carbon cycle. Forests cover one-third of the earth's land surface, store about half of the world's terrestrial carbon stock and account for 12-15 percent of the world's greenhouse gas emissions (GHGs). In some regions of the world, especially in the tropics, forest clearing is a major source of GHG emissions. In the temperate/boreal zone forest carbon stocks are more stable and are, on aggregate a net sink of carbon, removing more CO<sub>2</sub> from the atmosphere via sequestration than releasing it to the atmosphere through clearing. International efforts to tackle GHGs and climate change started more than a decade ago with fairly little attention to the role of forests, under the premise that the focus should be almost exclusively on fossil fuel combustion and energy, which are the largest GHG sources globally. But deforestation emissions are on about the same scale as the global transportation sector. Moreover, the loss of forest cover and the accompanying ecosystem services has continued, leading to broader support for global climate policies to address the role of forests. This support was most recently realized by the inclusion of reduced emissions from deforestation and degradation (REDD+) in the Cancun Agreement to the UN Framework Convention on Climate Change. These policies provide economic incentives to avoid deforestation and degradation and restore forest carbon stocks. This lecture will provide an overview of the forest-carbon-climate change issue at global and regional scales, give a historical perspective on the policies that have emerged to address the problem, define how these policies affect the economics of land use and forest management, and identify the challenges and perhaps unintended consequences that could arise from implementation.

**Biography**

Brian is widely recognized for his work on the economics of climate change policy, including the design of cap-and-trade policy elements to address cost containment and inclusion of offsets from traditionally uncapped sectors such as forestry and agriculture. He routinely advises members of the United States Congress and their staff on climate change legislative proposals. He is currently leading an effort to develop protocols and methods for reduced emissions from deforestation and degradation (REDD) in the Amazon region. Dr. Murray has been invited as a co-author of several national and international assessments of forest resources, especially related to climate change. Of particular note, he was a convening lead author of the Intergovernmental Panel on Climate Change's Special Report on Land Use, Land Use Change, and Forestry. He has convened several forums of economic modeling experts to examine and communicate the results of their climate, energy and land use policy efforts to the public and private sectors. His research has examined the economic effects of traditional command-based regulatory strategies for pollution control and more market-oriented approaches such as cap-and-trade programs and emission taxes. His work has been published in books, edited volumes, and professional journals. Prior to coming to the Nicholas Institute in 2006, Dr. Murray was Director of the Center for Regulatory Economics and Policy Research at RTI International, a university-affiliated not-for-profit research institution.

PhD, Resource Economics and Policy, Duke University, 1992

MS, Resource Economics and Policy, Duke University, 1987

BS, Economics and Finance, University of Delaware, 1983

**Areas of expertise:** environmental economics, climate & energy, offsets, REDD, business and the environment, forest management and silviculture, landscape dynamics, terrestrial ecosystems, water quality, carbon markets