



VALUING NATURE'S CAPITAL

# Climate and Energy Policy: The Role of Forests

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# Climate Policy

- Mandatory reduction pledges in all developed countries except US
- Voluntary carbon markets
- Mandatory cap-and-trade in NE; other State and regional Initiatives
- Coming Soon: cap-and-trade for the US?



# Energy Policy

- Energy Policy Act of 2005
- Energy Independence and Security Act of 2007
- Farm Bill: Food, Conservation, and Energy Act of 2008



## Catalyst for change: Administration

*“... we will embrace a new opportunity for both our farm and forest side ... that is to look at climate change not as a problem but as another solution ...”*

*As the Congress begins a discussion, a debate, about energy policy and climate change, agriculture (and forestry) has to be there, has to be engaged ... We have to lead this conversation ...”*

Keynote Address by Agriculture Secretary Tom Vilsack at the USDA “Agriculture Outlook Forum 2009”



## Catalysts for change: Congress

Gang of 15

*“Fully Recognize Agriculture and Forestry’s Role . . . .  
Strong, aggressive and verifiable offset policies can  
fully utilize the capabilities of our farmers and  
foresters.”*

June 6, 2008 Letter -- Principles to address in any  
final climate legislation



# Key policy topics for forestry

Carbon sequestration

Bioenergy

Land Use Change



## Carbon sequestration: contribution of forests

- Quantifying these effects strengthens our ability to “tell the story” in developing national mitigation legislation, as well as, inform the forest/range sectors’ contributions to meeting future international commitments for GHG mitigation.



## Contributions of forests, cont'd

### Specific analytical and policy needs:

- *Update the mid-term (2020-2050) best-estimate baseline projections of future US AFOLU carbon stocks/emissions*
- *Assess the magnitude and likelihood of potential GHG losses due to extreme or uncontrollable events such as increased wildfire regimes or climate die-back*
- *Evaluate the opportunities and magnitude GHG mitigation potential for a range of GHG offset prices*





## National Forests and Carbon Sequestration

- What's the capability of NFS lands to mitigate climate change under current and prospective management trends?
- Can we project growth and disturbance patterns under different management strategies?
- How will public expectations of NFS lands affect the role of public forests in mitigating the effects of climate change?



# Bioenergy, Climate Change, & Forests

- Are policies in support of biofuels the most effective approach to reduce GHG emissions and reduce dependency on foreign oil?
- When do woody biofuels become competitive with other sources? At what energy price?
- What are the implications of increased biofuels production for forest area?



## Bioenergy, Climate Change & Forests (cont)

- Could there be conflicts between biofuels and carbon sequestration objectives?
- Will biofuel production from forests negatively affect other forest benefits?
- Would prices for other wood products increase?
- What are the implications for forest owners, forest products industry, and US competitiveness?



## Land Use, Climate, Energy & Forests

- How do alternative climate and energy policies affect the agriculture-forestry transition?
- Are some policies more likely to reduce overall forest areas in the US, with associated reductions in the ability of forests to mitigate climate change?



## Land Use, Climate, Energy & Forests (cont)

- How do private and public forests interact in providing carbon sequestration, biofuels, and other wood supplies?
- How do private landowners respond to different policy mechanisms that encourage GHG reductions from land management?



## Unintended consequences of climate policy on US forests

- If transportation costs and foreign policies limit the amount of wood available for import, it may be undesirable to create long-term easements on US forests that limit domestic harvest levels.
- High carbon/energy prices could result in increased demand for harvesting, challenging efforts to conserve water and biodiversity.



## Risk Management: who bears the burden?

- Carbon sequestered in forests is subject to loss due to natural and human-caused events. Providers of forestry carbon offsets in the current markets and legislative proposals are required to suffer a discount to account for the risk of reversal. Alternatives to heavy discounting seek to minimize costs and maximize landowner participation, providing a means to keep forests in forests.



## Risk Management (cont)

- This analysis could lead to a development of a risk management program to help reduce costs and maximize participation of private landowners in emerging carbon and other markets.
- To begin, an actuarial analysis is needed that considers such factors as:
  - *Types of risks to cover*
  - *Premium rates by risks*
  - *Percentage of risk covered*
  - *Time period*
  - *Successive losses*
  - *Start-up and annual costs of program administration*
  - *Appropriate management tools (eg. \$ for a ton, ton-for-ton)*





# Summary

