# Stacking of Environmental Services from Agriculture

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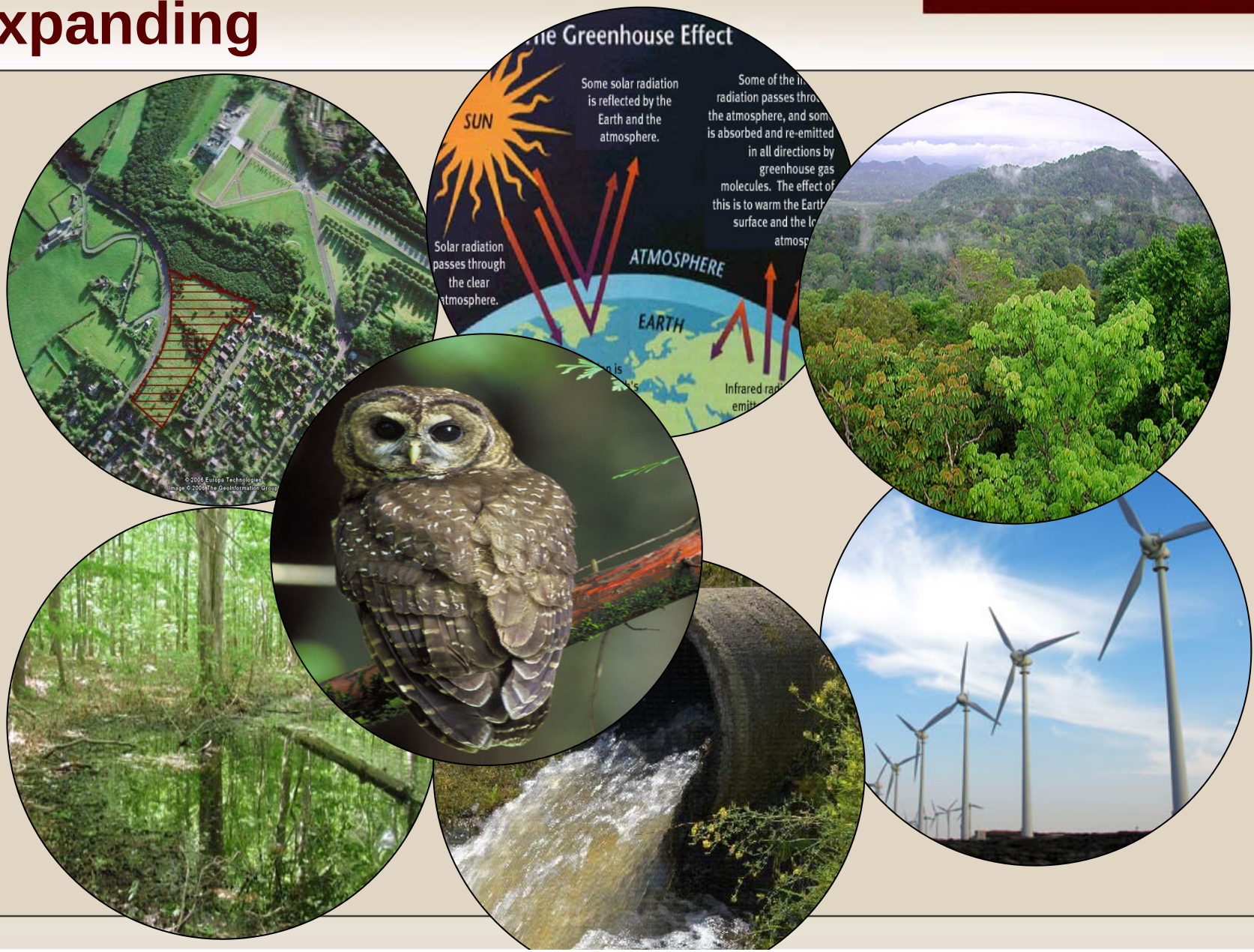
# Environmental markets are expanding



# Bundling vs. Stacking

Bundling

e.g. Wetlands Mitigation Banking


Stacking

In this talk I draw heavily on Cooley & Olander (2012), which provides an excellent overview of the issues

# Benefits of Stacking

- Increases market for offsets. Some BMPs that would not be economically viable with only a single market.
- Incentivizes high quality practices that deliver multiple ecosystem services

# Challenges of Stacking

- Additionality
- Market effects

# NC example of stacking

- In 2009 Environmental Banc & Exchange won a $911,000 contract to remove 100,000 pounds of nitrogen over 30 years.
- The claimed reductions were from two sites created as part of $11 million in contracts from the N.C. Dept. of Transportation in 2000 and 2002 to replace wetlands and streams.

Source: Dan Kane, *EBX Is Paid Twice for Wetlands Work*, News & Observer (Dec. 8, 2009).

# Responses to the NC project

- Not seen as innovative cost-saving approach.

*rather*

- "That money was supposed to pay to protect our water, and instead it is going into the pocket of a private company for no environmental benefit,"
  Alissa Bierma, the Upper Neuse Riverkeeper.
- Cooley & Olander report that no further stacking has been allowed and a rule was proposed that would disallow stacking.

# Stacking and Additionality

- "A proposed activity is *additional* if the recognized policy *interventions* are deemed to be *causing* the activity to take place." (Gillenwater, 2012, emphasis added)
- When a landowner has been compensated for creating a practice for one environmental service, it is difficult to justify an additionality claim for some other service.

# Market effects

- If stacking is allowed a single BMP generates multiple credits
  - Landowners will accept a lower price from each market – the supply curves are shifted downward.
  - Could result in little additional revenue for landowners.
  - In equilibrium, fewer BMPs would be funded.

# Stacking in practice

- Bundles
  - Wetland mitigation banking
  - Conservation easements
  - USDA Conservation programs
- Stackable services
  - Carbon sequestration
  - Water Quality Trading
  - Endangered species – Habitat Conservation Plans
  - Transferable development rights

# Current state of policies

- Most programs do not explicitly disallow stacking.
- However, additionality provisions tend to create barriers to stacking.

# Needs and challenges

- Stacking has important potential benefits
  - Incentivizes BMPs generating multiple environmental services, the kind of conservation that is most desirable
- Questions of additionality
  - Clarification of rules
  - Simultaneous actions might resolve this problem, but that's very difficult

# Potential

- Coordination of programs is needed
  - Coordination to ensure additionality
  - The optimal targets are related to provisions
- Example: Willamette Partnership in Oregon
  - Seeks to develop projects that simultaneously generate credits related to multiple environmental objectives.

# References


- Cooley, David and Lydia Olander. 2012. Stacking Ecosystem Services Payments: Risks and Solutions. *Environmental Law Reporter* 42(2):10150-10165.
- Kane, Dan. "EBX Is Paid Twice for Wetlands Work." Http://www.newsobserver.com. Raleigh News & Observer, 8 Dec. 2009. Web. 05 Apr. 2012. <http://www.newsobserver.com/2009/12/08/230607/ebx-is-paid-twice-for-wetlands.html>.
- Gillenwater, Michael. 2012. What is Additionality? Greenhouse Gas Management Institute Discussion Paper (January 2012, accessed 4/6/2012) <http://ghginstitute.org/2011/03/24/defining-additionality>