Water Quality Trading: What is an Alternative Approach?

Presented by Dan Nees
Environmental Finance Center
University of Maryland

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A Message of Despair Laced with Hope

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Presentation Overview

- Define attributes of a restoration financing system
- Address the role of markets in that system
- Identify barriers to water quality market development
- Identify opportunities for overcoming those barriers through an alternative implementation approach

Envision a Restored Chesapeake Bay

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- A restored Chesapeake Bay will have an associated ***financing system*** that will be responsible for supporting the restoration effort
- That financing system will be essential for allocating and distributing fiscal resources

Restoration Financing System

What will that financing system look like?

- Above all else, the restoration financing system must focus on and incentive efficiency: ***greatest benefit per dollar spent***
- In turn, efficiency will require three elements: science, performance, and cost reduction

Science and adaptive decision-making

Reducing uncertainty in the financing system

- In order to achieve restoration success, the financing system must be focused on supporting practices that make verifiable reductions in pollutants and improvements to water quality

Performance

Paying for success rather than activities

- If the metric for gauging financing effectiveness and efficiency is dollars per pound, then monies that are invested should be targeting pounds of pollution reduced
- In other words: pay for outcomes vs. outputs

Costs

Incentivizing innovation and efficiency

- To achieve restoration success, a financing system must incentivize reductions in cost, whether they are associated with administration, transactions, implementation, or science.

Where Do Markets Fit in This System?

- In theory, environmental markets address or rely on all three financing components
- In practice, environmental markets—specifically water quality—have been slow to develop, especially at scale

Why?

Benefits of Markets

- ***Flexibility:*** the most desired goods and services are produced
- ***Efficiency:*** goods and services are produced in the most efficient way possible (the most efficient producers will receive more profit than less efficient ones)
- ***Innovation is rewarded:*** producers who are innovative will come up with more efficient methods of production of goods and services

What Do Markets Require?

(…or at least really, really want…)

- Complete, or close to complete, information
- Accurate price signals
- Many buyers and sellers
- No, or at least very low, transaction costs
- No, or at least very low, barriers to entry

Barriers to Water Quality Trading

Why have markets been slow to develop?

- Uncertainty
- Lack of Trust

Uncertainty

Primarily a demand problem

- Environmental markets are in many ways defined by uncertainty:
  - ✓performance of best management practices
  - ✓political will and policy development
  - ✓regulation and enforcement
  - ✓technology
- ***Result: reduced information; unclear price signals; higher transaction costs; and, most importantly, no demand in the system***

Lack of Trust

Primarily a supply problem

- Directly related to uncertainty
- Chesapeake Bay restoration effort is defined by lawsuits, accusations, confrontation, and unyielding entrenched positions
- Lack of trust can be a huge detriment to market efficiency
- ***Result: much higher transaction costs; very restricted supply***

The Path Forward

- Lay the foundation for success
  - ✓Focus on outcomes rather than the implementation of a system
  - ✓Build on what's been working so far
- Demonstrate how accountable, transparent, efficient, and effective financing can work
- Incentivize the engagement of the marketplace and the private sector
- Work trading into that system
- ***Focus on what's been working***

What Has Been Working

Water quality trading programs have resulted in the foundation of an efficient, effective water quality financing system

- ***Established marketplace:*** tracking and accounting
- ***Significant transparency:*** verification and monitoring
- ***Foundation in science:*** credits are based on performance (at least sort of…)
- ***Focus on efficiency:*** pollution reductions per dollar spent are the focus
- ***Innovation:*** effective engagement of the private sector

What Can Work Now

- ***Growth offsets***
- ***In-kind market programs:***
  - ✓Point to point
  - ✓Nonpoint to nonpoint
- ***Performance-based subsidy programs***

Growth Offsets

- Necessary, but not sufficient
- Systems exist to make them work now
- Resistance is futile

In-Kind Market Programs

- Locally-based programs can dramatically improve financing efficiency
- Significantly reduced transaction costs:
  - ✓Greater certainty
  - ✓Clearer price signals
  - ✓Increased trust

In-Kind Market Programs

Case study:
Washington, DC

- Volume-based offset program
- Entirely stormwater
- Simple, innovative, and potentially very effective

Performance-Based Subsidies

Go with the flow…

- In effect, water quality trading as designed functions as a subsidy to suppliers
- A performance-based financing system could impact significant sources of funding immediately
- Would demonstrate the efficacy of much of the market system with much less risk: political, environmental, and financial

Performance-Based Subsidies

Case study: Maryland Chesapeake Bay Trust Fund

- Proposed demonstration project that will target urban areas
- Focus on pounds of pollution reduced
- Open bid: public and private bids will be accepted
- Innovation tied to science
- Focus on cost evaluation

Summary

Dan Nees
Senior Research Associate
Environmental Finance Center
University of Maryland
dnees@umd.edu
301-405-5421