

Inter-jurisdictional Trading in Environmental Markets: Implications for the Chesapeake Bay Watershed

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source: <http://smithtrail.net/the-chesapeake/>

Background

- Nutrient credit trading programs have evolved separately in the Chesapeake Bay jurisdictions
 - Differences across programs create barriers to interstate trading
- Chesapeake Bay TMDL has prompted increased coordination and a focus on consistency across jurisdictions' programs
 - Offers opportunities to harmonize programs in ways that promote or facilitate interstate trading
- Experience from other environmental trading markets may be useful for informing the development interstate trading rules and procedures in the Chesapeake Bay watershed

Introduction

Identified three key questions:

1. *How have systems supporting interstate trading evolved under different environmental market programs?*
2. *What specific approaches have these programs used to coordinate, manage, and administer trading across jurisdictions?*
3. *What implications do these programs and approaches have for interstate trading of nutrient credits in the Chesapeake Bay watershed?*

Advantages/Disadvantages of Interstate Trade

Advantages

- ✓ Increased market size leads to cost-savings
- ✓ Possible reduced administrative costs through efficiency gains (“economies of scale”)
- ✓ Competition reduces risk associated with “market power”
- ✓ Reduces “leakage” effects

Disadvantages

- Risk of local water quality impairment, or “hot spots”
- Interstate coordination may increase administrative costs
- Distributional effects may result in “winners” and “losers”

General Coordination Approaches

- **Ex ante harmonization**—Harmonization (e.g. agreeing to a common set of rules and procedures for generating credits) occurs *prior to* implementation of the interstate trading program.
- **Ex post harmonization**—Harmonization (e.g. adapting state rules and procedures) occurs *after* states have developed their own separate trading programs.
- **Mutual recognition**—Rather than harmonizing, states agree to accept credits that are approved in other states based on the other states' rules.
- **Home rules**—Rather than harmonizing, states accept credits generated in other states, but only if they comply with the accepting state's rules or procedures for credit generation.

Note: trading programs can have elements of more than one of these approaches.

Existing Environmental Markets with Interstate Trading

1. Water Quality Trading Programs

(ex ante harmonization and mutual recognition)

- The Ohio River Basin Water Quality Trading Project
- The Lake Tahoe Clarity Crediting Program

2. Carbon Markets

(ex ante/ex post harmonization and mutual recognition)

- Regional Greenhouse Gas Initiative (RGGI)
- Western Climate Initiative (WCI)
- EU-ETS

3. Renewable Energy Portfolio Standards

(ex ante harmonization, ex post harmonization and home rules)

4. Other

- Clean Air Markets
- Wetland Mitigation Banking

Ohio River Basin Water Quality Trading Project

- Interstate nutrient credit trading plan developed by EPRI and signed by KY, IN, and OH in 2012
- Currently in pilot phase but faltering due to lack of demand for credits (no regulatory driver like the TMDL)
- **Ex ante harmonization** of interstate trading:
 - all states operate under the same rules
 - credit generated in one state can be applied in another
- **Mutual recognition** of state-specific regulatory requirements to establish baseline in credit calculations
- Administrative roles
 - EPRI: overall management and final approval of credits
 - States: monitoring, verification, and inspection of BMPs
 - Soil and water conservation districts: technical assistance and registration (common registry provided by Markit)

Lake Tahoe Clarity Crediting Program

- Developed in 2011 by CA and NV regulatory agencies (and Environmental Incentives)
 - a flexible, cost-effective approach for meeting the lake's sediment TMDL
- Common accounting system for calculating and comparing required and actual sediment load reductions from urban stormwater sources
 - difference can be transferred between sources
- **Ex ante harmonization** through common set of rules and procedures for calculating, registering, verifying, and reporting credits
- Administrative roles:
 - Urban jurisdictions responsible for developing, inspecting, and reporting load reductions for their catchments
 - State agencies responsible for approving and inspecting credits in own districts and jointly maintaining credit tracking system

Regional Greenhouse Gas Initiative (RGGI)

- Cap-and-trade program for GHG emissions from power plants in 9 northeastern and mid-Atlantic states
- Regulated sources allowed to buy “offset allowances” created by approved projects implemented by nonregulated sources
- **Ex ante harmonization** of interstate trading: alignment of state regulations to ensure allowances are fungible across state lines
- **Mutual recognition** of state-specific regulatory requirements for setting baselines
- Administrative roles
 - RGGI, Inc. provides technical and administrative support, maintains tracking system, and operates allowance auction platform
 - States responsible for approval, monitoring, and verification of allowances in own state

Western Climate Initiative (WCI)

- Began in 2007 as a regional market-based approach for reducing GHG emissions among 5 western states and 4 Canadian provinces
- In 2014, **CA and Quebec** formally linked their cap-and-trade programs through the WCI partnership
- **Ex ante harmonization** of interstate trading: alignment of state regulations to ensure allowances are fungible across state lines
- **Ex post harmonization:** Harmonization and Integration Agreement between CA and Quebec defines process for continuing bilateral consultation and coordination of the two programs
- **Mutual recognition:** each jurisdiction has own list of approved project types for generating offset allowance credits
- Administrative roles
 - WCI, Inc. provides technical and administrative support, maintains tracking system, and operates allowance auction platform
 - States responsible for approval, monitoring, and verification of allowances in own state

European Union Emissions Trading System (EU ETS)

- Cap-and-trade system for CO₂ emission allowances, initiated in 2005 and now includes 31 countries
- **Ex ante harmonization** of trading rules between member countries
- Links to other emission trading systems are being explored, through combinations of **ex post harmonization** and **mutual recognition**

Current experiences with the development of linkages between different emissions trading systems, suggest that systems must be compatible but not completely harmonised. Key features for compatibility for linking include the level of ambition, rules on the use of offset credits and complications around intervention in price.

Source: EU-ETS Handbook

- Administrative roles
 - European Commission (EC) develops rules and procedures for trading
 - Member States administer national accounts on the common Union Registry System and responsible for monitoring, reporting, and verification
 - European Energy Exchange (EEX) provides common auction platform for allocating allowances

Renewable Energy Portfolio Standards (RPS)

- Over 30 states allow electric utilities to purchase Renewable Energy Certificates (RECs) from other generators to meet renewable targets
- **Ex ante harmonization:** Several multi-state REC Tracking Systems (registries) were set up to allow for and track REC transactions within and between member states
- **Ex post harmonization:** More recently, systems are being developed to allow for and track REC transactions between registries
- **Home rule:** Each state has eligibility rules for RECs; the regional registries ensure that out-of-state RECs meet these requirements.
- Administrative roles
 - States set eligibility rules for RECs
 - Regional tracking systems/registries register, track, and transfer RECs within and between states and tracking systems
 - Independent Service Operators/Regional Transmission Organizations (ISO/RTO) verify electricity generation to grid in their control area

Clean Air Markets

- Several cap-and-trade programs for NO_x and SO_x emissions since 1995
 - Primarily administered by the federal government (EPA)
 - Do not include offset allowances/credits from nonregulated sources
- Rules for interstate trading in allowances have been established primarily through **ex ante harmonization**
- Evolution in interstate trading
 - early program (Title IV Acid Rain) placed few restrictions on trades between states
 - most recent program (Cross-State Air Pollution Rule) is very restrictive

Conclusions

What implications do these programs and approaches have for interstate trading of nutrient credits in the Chesapeake Bay watershed?

- Very few examples of interstate trading in existing water quality trading programs
- Most existing interstate trading programs have developed through ex ante harmonization, which is less relevant for Chesapeake context
- All reviewed programs have an **administrative/coordinating body**
 - governmental: EPA, EC
 - non-governmental: EPRI, RGGI, WCI
- All reviewed programs have **centralized/standardized systems** for
 - auctioning credits/allowances (clearinghouses)
 - tracking credits and trades (registries)
- Most programs use a mutual recognition approach to address cross-state differences in regulatory requirements
 - ensures regulatory additionality

Conclusions (Cont'd)

What implications do these programs and approaches have for interstate trading of nutrient credits in the Chesapeake Bay watershed?

- Developing linkages between trading systems requires that systems be compatible but not necessarily fully harmonized
 - Mutual recognition of eligibility rules for sources and practices
 - Mutual recognition of monitoring and verification practices

- Potentially useful examples of ex post linkage between existing programs include:
 - CA and Quebec carbon trading programs
 - Swiss and EU ETS carbon trading programs
 - linkage of regional RPS tracking systems (registries)