Water Trading: WET

Water Quality Trading for Europe

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combining ecology and economics

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Introduction

1. Background
2. Water Emissions Trading: how and what
3. US experience
4. Europe
5. Conclusions

1. Background for the meeting

- >20 years of experience in the US, supported by US-EPA
- Sean Blacklocke visiting
- Rob van der Veeren studying
- Relevant people in Utrecht

2. Water Emissions Trading: how and what

- Similar to air emissions trading: regulated trading under a cap
- Same advantages: cost effectiveness, target achievement, incentive for innovation
- But: risk for hotspots, complicated relation emissions-environment

2.Water Emissions Trading: how and what

- Applicable for emissions to water, nutrients, energy (cooling water discharges), other pollutants
- Water shortages: tradable water rights
- Water surplus: water storage offsets/obligations.

2. Practice

- Prevention of Hotspots:
  - Trades only allowed as far as water quality norms are met
  - Official approvement of every trade?
  - Caps and sub-caps
- Trading Ratios: because 1 kg reduction over here, ≠ 1 kg extra emission over there.
- Transaction costs should be as low as possible: easy trading. www.nutrient.net

Types of WET:

1. Centrally managed trading
2. Trading associations
3. Market-like trading
4. Small-scale offset programs

Source: *Water-Quality Trading*, by Jones, Bacon, Kieser and Sheridan, 2006

1. Centrally managed trading

- Type: central authority directs allocation of permits, reduction measures and payment.
- Example: Long Island Sound
- Pro: resembles traditional regulation
- Cons: less local freedom, less market allocation, less cost-effective, bureaucratic

2. Trading associations

- Type: point-sources start an association with one overall permit, and exchange emission credits and payments.
- Example: Tar-Pamlico Trading Association (founded 1989)
- Pro: legally simple (if pilot-project status granted)
- Con: limited cost-saving trades in the market?

3. Marketlike trading

- Type: optimal market functioning, like EU-ETS (CO_2-trading)
- Example: Lower Boise River
- Pros: lowest costs, liquid market
- Cons: technically and legally complicated?

4. Small-scale offsett programs

- Type: one point-source paying measures with nearby farmers
- Example: Rarh Malting Company
- Pros: small-scale, simple
- Cons: no liquid market, risk of market-power

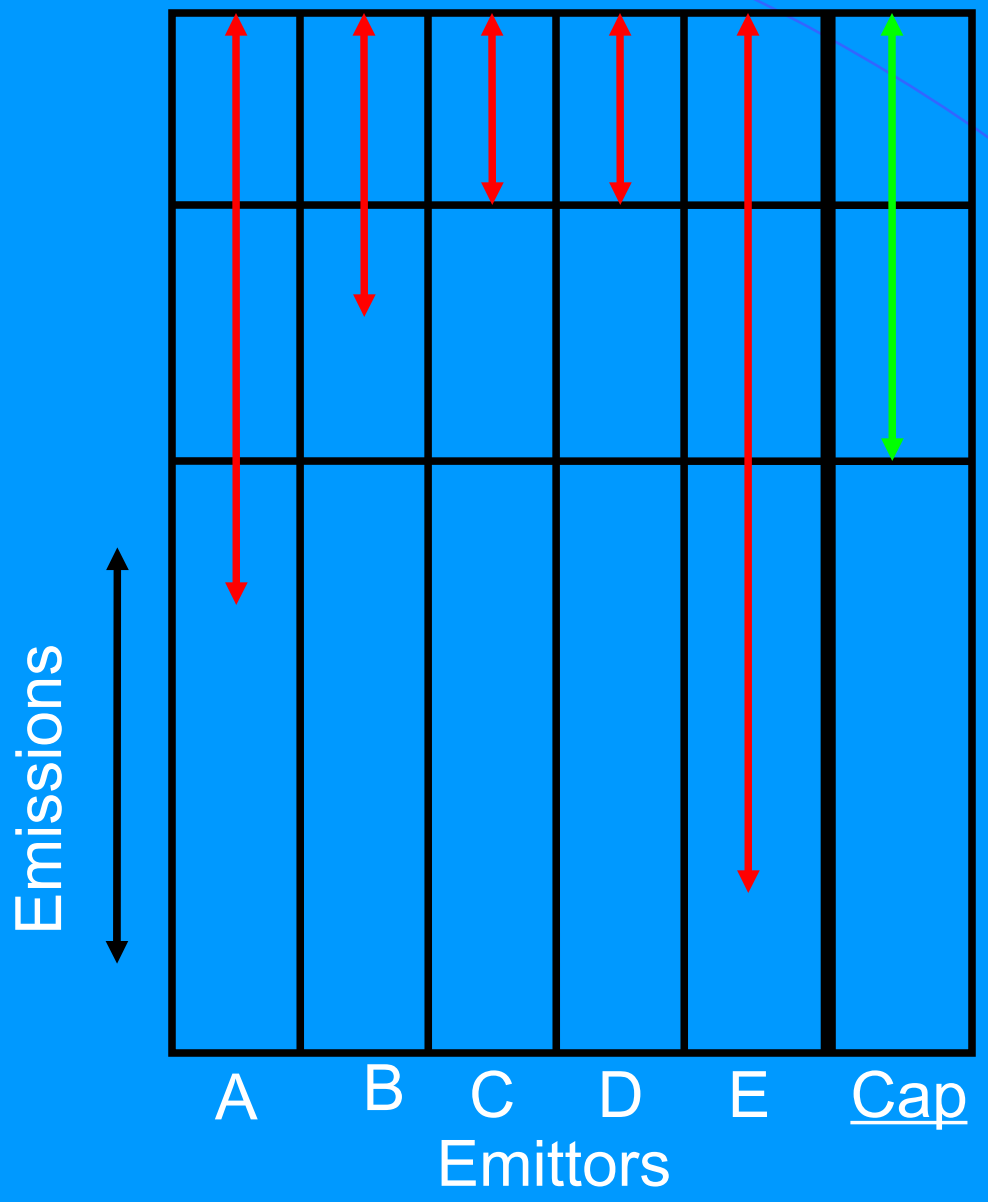
4. Europa

- A number of studies
- Fits well within principles of WFD and Marine Strategy Framework Directive:
  - Polluter pays principle
  - Cost recovery
  - Cost-effectiveness
- Baltic Sea (Helcom, Finland)
- Sweden: innland, hybrid system including taxes

Europe - obstacles

- Legal: does existing regulation leave room for cost-saving trades?
- Or: does existing regulation go far enough?

Emissions trading and existing regulation, hotspots



Emissions level 3: todays emissions

Emissions level 2: Max. emissions due to existing regulation and hotspots

Emissions level 1: Overall cap due to WFD

Obstacles → opportunities

- Legal: change directives, as with EU-ETS
- Monitoring: use rules of thumb and BMP's (Best Management Practices)
- Social - protect farmers: allocate them many permits → 'Polluter Pays' not on sector level, but on an individual level.
- 7th FP: EU research on economic instruments

Conclusions

- Much variation possible (at least 4 types)
- Possible to adapt to local conditions
- WET deserves to be further explored
- Much experience from the US to benefit from

Questions & discussion

- Under what conditions could emissions trading be beneficial in practice for water management in Europe?

- - how could a trading program be shaped in practice (US examples)
- - legal aspects,
- - monitoring
- - transaction costs
- - distributional and social aspects