

Linkages to Other Markets & Stacking

-Role of Finance-

Patrick Coady-*Financing Conservation*





Stacking and Finance

- Policy debate vs. access to finance
 - Creating an asset
 - Creating cash flow
- Double dipping vs.
 - Policy goals
 - Landowner value
 - Seller
 - Buyer



Financing Gap

- Getting early involvement
- Show me the spread sheet
- Understand what makes a viable investment
- Getting to sustainable finance (market size, repeatability, transaction cost, time line)



One Minute Drill on Ecosystem Financing

- **Demand-Cost-Price-Market>Returns (Show me Spreadsheet)**
- Demand drivers (Currently Federal regulation)
- High transaction costs
- The time value of money: Approvals and commitment
- Creating non-liquid asset (credits)
- Project size issues (Small, local and very customized)
- Melding science, metrics, regulation, monitoring
- Generally not for institutional capital

- **Summing Up:** Thin markets. Not an easy slog, stacking does not make it simpler or better.

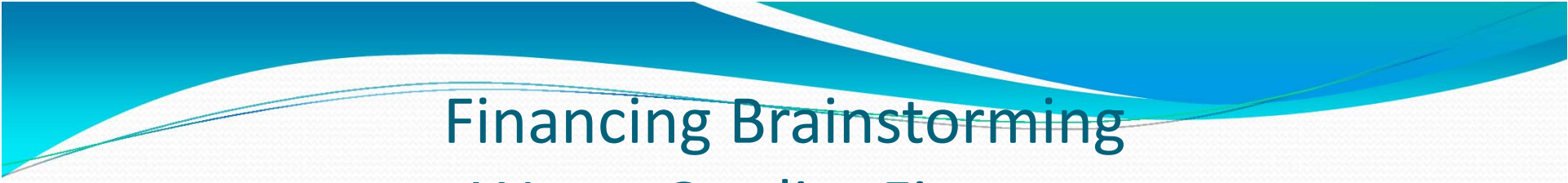


Most Prevalent Private Capital Models

- Mitigation bankers (project developers)
 - Opportunistic
 - Need to minimize development costs
- Ecosystem funds
 - Management fee covers project development
 - Need scale and predictability

Imagining Markets

- Wetlands/stream mitigation (ha or linear m) CWAa; CERCLAb
- Floodplain trading (ha leveed agricultural land TMDLc restored to floodplain) (Cheng et al. 2001)
- Marshes, coast line
- Variety of species habitat banks (ha habitat) ESAd
- Carbon-CO₂ (tons of CO₂ equivalent) CARBe; voluntaryf
- Copper (kg) TMDL
- Heavy metals (kg) TMDL
- Ammonia (kg) TMDL
- Selenium (kg) TMDL
- Biological/chemical oxygen demand (kg) TMDL
- Phosphorus (kg) TMDL
- Sediment (tons) (Cheng et al. 2001) TMDLg
- Water temperature (thermal; kCal day⁻¹ m⁻¹) TMDL
- Nitrogen – including point source, non-point TMDL source, and floodplain sources (lbs N; ha of upland buffer in wetlands or m of linear stream buffer)
- Impervious surface (ha) (Welty et al. 2005) TMDL



Financing Brainstorming Water Quality Finance Beyond the Credit Trading

- Taxpayer driven implementation vs. private capital and markets (debt versus equity understanding)
- Convergence and Green Infrastructure
- Pay for performance
- Avoided costs and how to capture
- Green bonds: The latest best and greatest idea
- Role of “impact” investors?
- Public private partnerships
- Special purpose authorities



Ruminating on Finance Considerations

- Water Trading Market size: \$10's of million?
- Policy, regulation (predictability, leakage timeliness), project developer views
- Cost of creating asset (time and money)
- Maintaining functionality, verification, monitoring
- Conservation goals vs cost of creating the credit asset and marketing the credit



Issues

- Integrate System “silo’s”-Policy, Politics, Regulation, Stakeholders, Science, Goals, Economic Models, Business Models, Finance
- Stacking adds time (=more money and risk)
- Fed vs Fed, Fed vs State, Local vs. Fed and State
- Equivalency and consistency (permitting, leakage)
- Verification and monitoring-maintaining functionality
- Flexibility-perpetuity vs. term
- And so on.....



Investable-Repeatable-Scalable

- Involved in project to move conservation finance including ecosystem services from the current state of affairs to investable, repeatable and scalable.
- If I gave you a check for \$300 million, how would use it in the realm of payments for ecosystem services? Nature of investments? What return would I get?

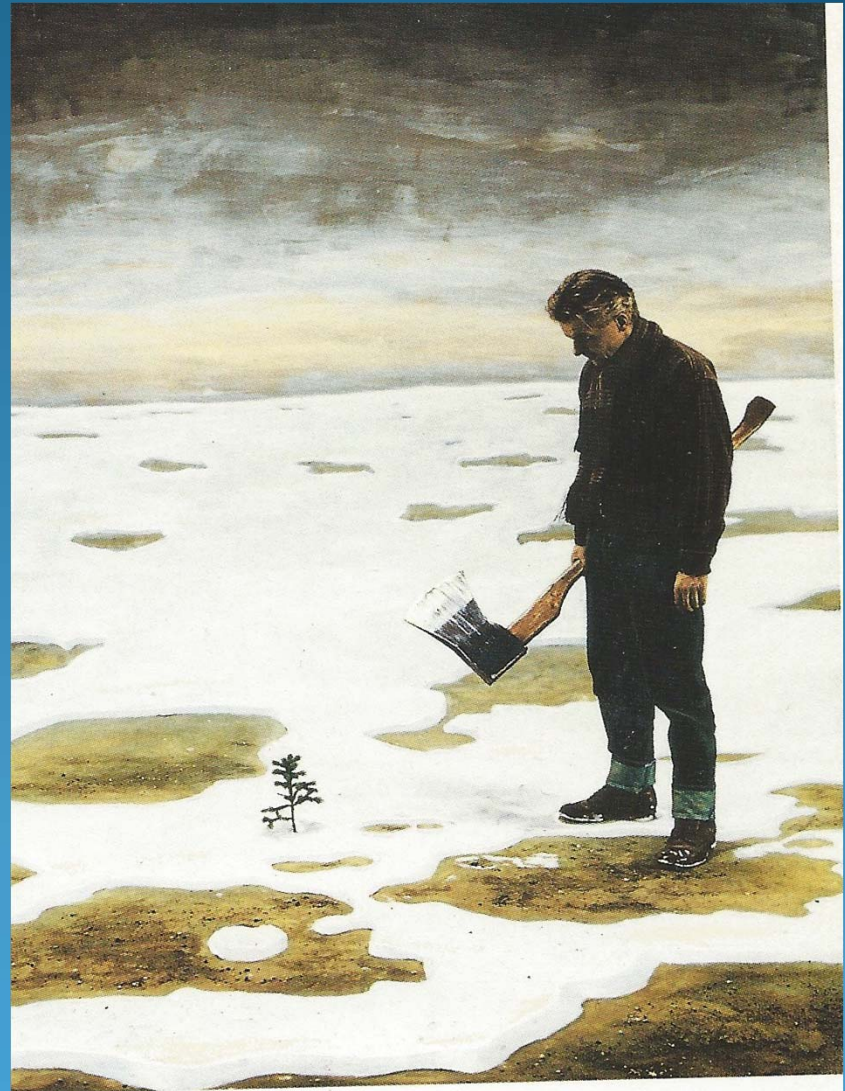


Summing Up

- For the immediate future, fix existing marginally functioning markets. I don't see stacking helping the finance dilemma.
- Work toward convergence and overcome the “Silo” problem
- Get business models, finance considerations and long term viability into the process earlier and more substantively.

Adirondack Park

Perhaps First and
Largest Payment for
Ecosystem
Services-
America's First
Wilderness
Or, Protection of
Shipping?





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