

# Valuing ecosystem services: when do taxes, fees and markets for ecosystem services provide reasonable measures of value?

David Simpson

Director, Ecosystem Economic Studies  
National Center for Environmental Economics  
United States Environmental Protection Agency

[simpson.david@epa.gov](mailto:simpson.david@epa.gov)

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When do taxes, fees and markets for ecosystem services provide reasonable measures of value?

*Rarely.*

. . . And when they do, is our work done?



The less public is demand, the less accurate is market price as a measure of social value





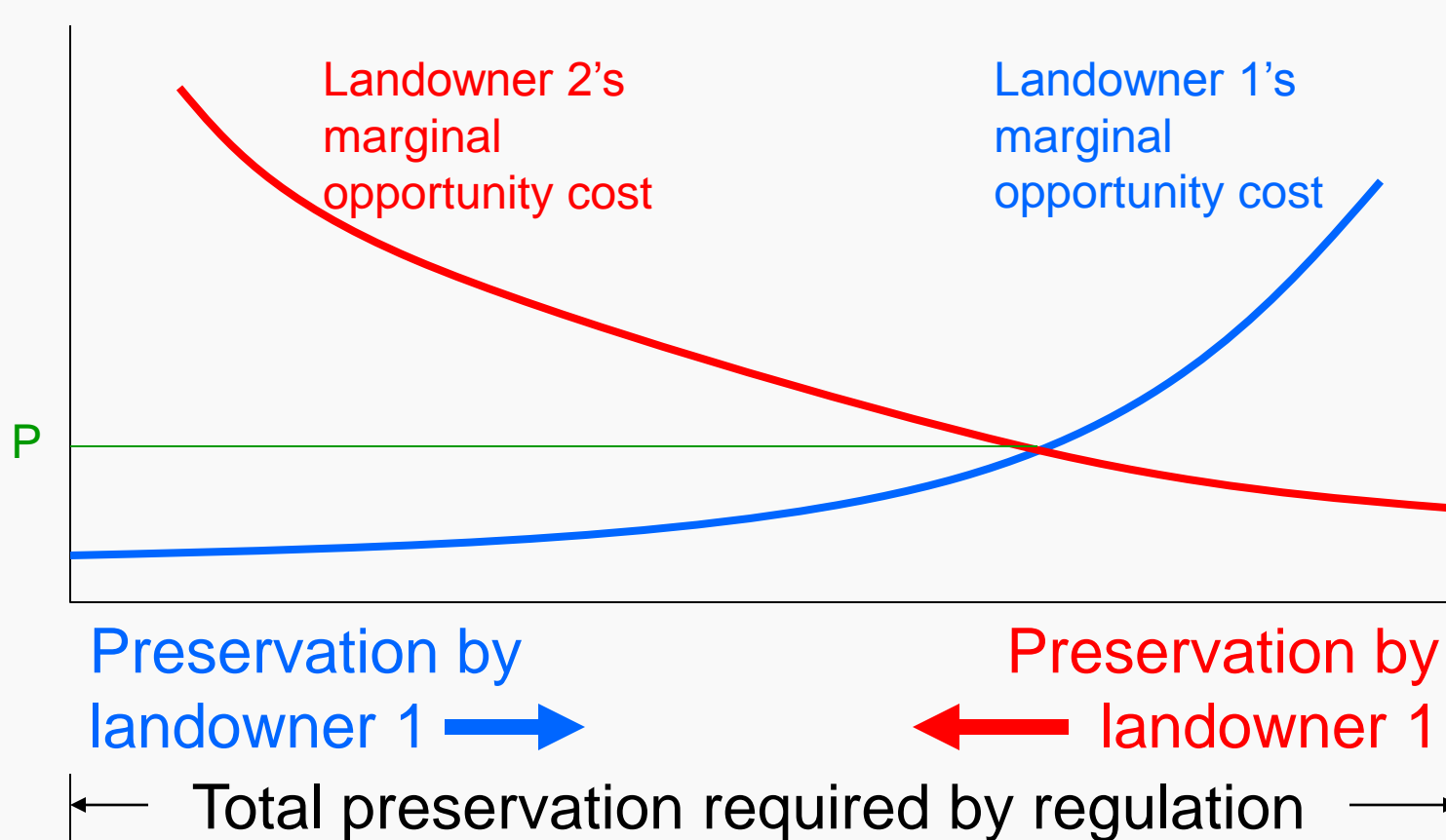
## When would the market price overstate marginal social benefit?

Consider the celebrated Catskills example; EPA motivated preservation of land by making drinking water supply dependent on it.

*It is questionable whether New York City would have chosen to protect water quality by protecting the watershed absent that federal pressure . . . Although consumers might prize safe drinking water, they also savor low water rates, and might not be willing to support a rate increase needed to purchase land that would promise water quality services. (Salzman, et al., 2001)*



# Prices in tradable permit programs





Regulatory market prices only reflect social benefits if “caps” are chosen optimally

Are caps chosen optimally?

- Pursuit of other social objectives (e. g., agricultural set-aside programs)
- Uncompensated global externalities
- Disproportionate political influences



Even if caps are chosen optimally, will marginal abatement costs be equated to marginal social benefits for all participants?

- Information problems in markets
  - Adverse selection (e. g., Montero on  $\text{SO}_2$ , Wara on GHGs)
  - Leakage (e. g. Wu on CRP, concern over REDD)
- Why have trades in some markets been so rare?
  - Liability concerns among would-be buyers
  - Sellers fear “slippery slope” to more onerous regulation
  - Thin markets in local public goods



# Taxes and fees

- Are taxes and fees potentially more accurate measures than tradable permit prices?
- Political arguments concerning tradable permits apply here as well.
- In some countries environmental taxes are theoretical curiosities, not practical alternatives.
- Interaction with pre-existing distortions may mean that taxes would diverge from marginal social benefits (Goulder & Parry)
- Competing objectives of Pigovian and Ramsey taxes:
  - Pigou: correct externality; tax “works” if there’s a significant quantity response.
  - Ramsey: raise revenue; tax “works” if there is not a significant quantity response.





The question begs a question:

- If taxes, fees and markets for ecosystem services provide reasonable measures of value, why do we need to do anything more? We would already have “internalized the externality”.
- Could taxes, fees, or market prices be used in trans-national benefit transfers?