



Ecosystem Services under Benefit and Cost Uncertainty: An Application to Soil Carbon Sequestration

Sergey S. Rabotyagov

Abstract

Benefit and cost uncertainty in provisioning of ecosystem services are investigated in the context of soil carbon sequestration. Multiple parcel-level carbon sequestration options are considered. Uncertainty has been a widely stated reason for not including soil carbon sequestration in the portfolio of greenhouse gases reduction measures. Biophysical simulation models are used to generate a distribution of resulting environmental benefits. An econometric model of conservation practice adoption is used to generate a distribution of costs. The results provide a magnitude of uncertainty discount for soil carbon offsets and the budget margin of safety, and may assist in formulating carbon sequestration policy. (*JEL D81, Q24*)

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