Marginal Willingness to Pay for Nature-Based Solutions: Evidence from Transaction Prices of Drained Peatlands

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Abstract

To quantify society's marginal willingness to pay (MWTP) for nature-based solutions to climate change, we assemble a novel dataset of sales of drained peatlands, which are a major source of CO_2 emissions. Drained peatlands across the US are identified using soil, land use, and hydrological data and linked to property transaction records from 1996–2022. Properties with deeper layers of peat and more belowground CO_2 have greater potential for emissions avoidance upon restoration. Restoration efforts have been underway the past three decades, allowing for causal estimation of MWTP for nature-based solutions as the elasticity of the sales price to a property's CO_2 belowground. We find the MWTP is several times larger on properties with co-benefits arising from biodiversity and wildfire risk.