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

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April 2025

Abstract

Nature-based solutions (NbS) are viewed by investors, firms, and governments as the most economical way in the medium term to fulfill their carbon pledges. Focusing on peatlands—an ecosystem that stores more carbon than all other terrestrial vegetation combined—–we quantify the marginal willingness to pay (MWTP) for NbS. We develop a method to identify drained peatlands across the US using soil, land use, and hydrological data. Linking this information to real estate transactions from 2000–2022, we estimate the elasticity of drained peatland prices with respect to variation in their carbon-sequestration potential following restoration. Using this hedonic approach, we estimate a MWTP of $7 to $15 per ton of carbon, which rises over the sample period. The results are robust to controlling for agricultural productivity, development pressure, biodiversity value, and jurisdiction fixed effects.