



Environmental Institutions Seminar Series

Presents

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The Economic Value of Tropical Forest for Coffee Production

Wednesday, November 10, 2004
3:30 pm – 5:00 pm

A158 Levine Science Research Center, Research Drive, Duke University

Abstract

Can economic forces be harnessed for biodiversity conservation? The answer hinges on characterizing the value of nature, a tricky business from biophysical, socioeconomic, and ethical perspectives. While the societal benefits of native ecosystems are clearly immense, they remain largely unquantified for all but a few services. We estimated the value of tropical forest in supplying pollination services to agriculture. We focused on coffee because it is one of the world's most valuable export commodities and is grown in many of the world's most biodiverse regions. Using pollination experiments along replicated distance gradients, we found that forest-based pollinators increased coffee yields by 20% within ~1 km of forest. Pollination also improved coffee quality near forest by reducing the frequency of "peaberries" (i.e, small misshapen seeds) by 27%. During 2000-2003, pollination services from two forest fragments (46 and 111 ha) translated into ca. US\$60,000/yr for one Costa Rican farm. This value is commensurate with expected revenues from competing land uses and far exceeds current conservation incentive payments. Conservation investments in human-dominated landscapes can therefore yield double benefits: for biodiversity and agriculture.

Biography

Taylor Ricketts is the Director of the Conservation Science Program at World Wildlife Fund, U.S. Dr. Ricketts' interests span a broad range of topics in ecology and conservation biology, including global patterns of biodiversity and threats, the ecological and economic consequences of habitat fragmentation, and the interactions between natural and human-dominated habitats in agricultural landscapes. Dr. Ricketts received his Ph.D. from Stanford University in 2000 and has received numerous awards for his work from the Society for Conservation Biology, the National Science Foundation, the Summit Foundation, and others.



**Reception following
in Hug Commons (Nicholas School)**

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