

Department of Environmental Science and Policy

Seminar Series

Searching for an End to Deforestation: Quantifying the Impacts of Conservation Interventions

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UCSB

DATE: Tuesday, 02/15/2022 Time: 1:00 pm Location: Zoom

<https://miami.zoom.us/j/94346642198?pwd=cXdRcWpDcW5zcDhzanJ5c2xnRXg1UT09>

Meeting ID: 943 4664 2198

Passcode: 016088



Abstract: Novel conservation interventions, including payments for ecosystem services, eco-certification and indigenous tenure reform, have fostered hope that an end to deforestation may be within reach. Despite this optimism, these policies' impacts on people and ecosystems are often poorly understood. In this talk, I highlight how econometric methods of causal inference can be applied to remotely sensed data to provide important insights to guide conservation. However, this approach also poses underappreciated challenges. Using analytical proofs and simulations, I show that the estimated impacts of conservation interventions are frequently biased – their significance, magnitude and even direction may be incorrect. I conclude by providing a vision for how rigorous, interdisciplinary research can guide society towards more effective and equitable conservation practices.

Bio: Robert Heilmayr is an Assistant Professor of environmental and ecological economics at the University of California, Santa Barbara's Environmental Studies Program and the Bren School of Environmental Science and Management. In his research, Robert combines emerging methods of causal inference from economics with data made possible through advances in Earth observation to answer pressing questions about how society uses and conserves natural resources. Robert's current research focus is on the environmental, economic and distributional consequences of nonstate policies to end deforestation. He received his B.A. in Environment, Economics and Politics from Claremont McKenna College, his M.A. in Economics from Stanford University, and his Ph.D. in Environment and Resources from Stanford University. His research has been published in top scientific journals, including the *Proceedings of the National Academy of Sciences*, *Nature Climate Change*, and *Nature Sustainability*. Robert also strives to translate his research into action, whether through participation in policy processes (e.g. High Carbon Stock Approach, Intergovernmental Panel on Climate Change) or through effective communication with the media (e.g. research cited in *The Economist*, CNN, BBC, NPR, and *Rolling Stone*).

