

PhD Dissertation
Department of Environmental Science and Policy
College of Science
George Mason University

Candidate: Derric Tay

Defense Date and Time: November 16, 2020, 3:45-5:45 pm EST

Defense Location: online meeting through Zoom (RSVP to slister1@gmu.edu for session link)

Title: Evaluating the Forest Protection Benefits of Costa Rica's Payment for Environmental Services Program

Dissertation Director: Dr. Thomas Lovejoy

Committee: Dr. Todd La Porte, Dr. John Qu, Dr. Dann Sklarew

ABSTRACT

Costa Rica's *Pago de Servicios Ambientales* (PSA) program is an example of a "payments for ecosystem services" program, which compensates landowners for activities such as protecting forests. Its effects on forest protection in Costa Rica are the subject of this dissertation. Non-PSA points and PSA protection contracts across the country were examined against a global dataset of gross forest cover loss, to estimate avoided deforestation and PSA performance. Then, Google Earth imagery was used to examine forest condition in detail for a PSA contract and two non-PSA points, to demonstrate the use of this resource in aiding the above analysis.