

**Economics  
Seminar  
Series  
2018**



**SOUTH ASIAN UNIVERSITY  
FACULTY OF ECONOMICS**

**Seminar**

***Conservation Easement Allocations to Address Localized Spillovers in Grassland Conversion: Analysis using remotely-sensing data***

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**Date:** November 16, 2018  
(Friday)  
**Time:** 2:30 p.m.  
**Venue:** FSI Hall, Akbar Bhawan,  
Satya Marg, Chanakyapuri, New Delhi

**All are Welcome**

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**ABSTRACT**

We evaluate conservation easement allocations for protecting remnant grasslands in the U.S. Prairie Pothole Region. Spatial-temporal patterns of permanent grass conversions and easement allocations are analyzed in North Dakota and South Dakota during 1997-2016 and 2006-2016, respectively. While grass conversions occurred near contiguous croplands, the easements were acquired away from conversion sites, near the contiguous grasslands. We conjecture that private land use decisions generate reinforcing localized spillovers and propose a one-shot, binary-choice game-theoretic model of permanent grassland conversions where neighboring land parcels exhibit strategic complementarities. We show that easements can inhibit conversion more effectively when acquired on lands with weak cropping incentives (e.g., poor soils), and acquired simultaneously as contiguous clusters. A duration model provides empirical evidence that higher grass density inhibits conversion risk locally. Dakota's easements were acquired on relatively large tracts with low cropping suitability (poor soils), which is deemed cost-effective by our land use decision model.

**Keywords :** network spillover-effects, mechanism design, property rights, conversion cascades, waterfowl conservation.

**JEL Classifications :** Q5, H4, D23