

# CENTRE FOR SUSTAINABILITY AND GOVERNANCE (CSG) Presents...

## Brown Bag Sessions

### Can roads contribute to forest transitions?

PhD Candidate – Environmental and Natural Resources Economics, Duke University.

Roads are well-known drivers of deforestation. Yet in particular settings, there are reasons to expect that new roads could conversely contribute to the expansion of tree cover. Roads may (1) raise the relative productivity of labour in non-agricultural sectors, thereby reducing agricultural activity; (2) facilitate price convergence across regional forest-product markets, raising profits from forest management or plantations; and (3) encourage substitution from locally collected fuelwood to other energy sources. I explore this hypothesis using a natural experiment: a large rural roads construction program in India. I combine satellite, survey and census data to create a village-level, countrywide panel for 2000-2014, and apply generalized difference-in-differences and IV strategies. For India as a whole, I find that rural road construction contributed to tree cover expansion, in great contrast to the existing empirical road-forest literature. Further, I demonstrate considerable variation in road impacts across economic settings within India: frontier settings saw reductions in tree cover due to new roads, while less isolated settings with more agricultural development saw increases in tree cover. These results inform the spatial targeting of roads, while broadening the set of mechanisms used to explain forest transitions (the reversal of forest cover loss).

#### About the speaker:

David Kaczan is an economist in the Sustainable Development Unit of the World Bank, Washington D.C. (starting Sept. 2017). His primary research focus is land use change and development. He completed his PhD at Duke University, USA, earlier this year. Prior to doctoral study, he completed a Masters in agricultural and resource economics at the University of Alberta, Canada. He comes from Adelaide, Australia, where he worked at CSIRO on projects on water management and climate change.

**Date:** Thursday 27 July 2017

**Time:** 12:00pm – 1:30pm

**Location:** RR5-09 (Level 5, Room 9, Rowland Rees Building) City West [[campus map](#)]

Lunch will be provided on the day so please confirm for catering purposes.

For any further information and enquiries please contact  
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