Nilesh N. Shinde

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Summary

- Graduate student in Forestry with a focus on the natural resource economics and environmental informatics.
- Studying household land-use choices in India and Brazil.
- In India, the primary data is analyzed using discrete choice modeling between tree and non-tree cultivation.
- Using a structural equation modeling to estimate the impact of climate risk belief on land use choice.
- In Brazil, I study the relationship between conflicts over land ownership and deforestation in the face of new environmental legislation in the Amazon region.
- Data collection and wrangling using
  - Web Scraper with Python for land conflicts,
  - Remote sensing data using Google Earth Engine and
  - Secondary data sources using BigQuery for Base dos Dados Mais: Repositório de Dados.
- Analyzed using difference-in-difference and spatial econometric techniques using R.

Work Experience

Graduate Research Assistant   **August 2018 – present**

Department of Forest Resources and Environmental Conservation, Virginia Tech

- Project title: Spatiotemporal Drivers of Fine-Scale Forest Plantation Establishment in Village-Based Economies of Andhra Pradesh. Funding organization: South/Southeast Asia Research Initiative (SARI) at NASA's LCLUC programs.

  Advisor: Dr. Stella Schons

Graduate Teaching Assistant   **August 2018 – present**

Department of Forest Resources and Environmental Conservation, Virginia Tech

- Courses: Natural Resources Economics (Fall 2018) and Water Policy and Economics (Fall 2019).

Education

Ph.D. Virginia Tech, Blacksburg, VA   June 2018—June 2022

- Forestry with focus on Natural Resources Economics and Environmental Informatics
- Funded by the Institute for Critical Technology and Applied Science (ICTAS) Doctoral fellowship and the William J. Dann Fellowship at Virginia Tech and by the NASA-LCLUC program.

M.Sc. University of Campinas, São Paulo, Brazil   January 2016—June 2017

- Development Economics
- Funded by Central Única dos Trabalhadores (English: Unified Workers' Central) Brazil.

B.E. Savitribai Phule Pune University, Pune, India.   June 2006—June 2010

Mechanical Engineering

Techniques & Software

Python, R programming, QGIS, Google Earth Engine (JavaScript), Big Query (SQL), STATA and LaTeX.

Statistical Skills

- Data analysis and Econometric Skills

    o   Econometric modeling, Causal modeling with Cross-sectional & Panel data, Time-series modeling, Spatial Econometrics and Big-data Econometrics.

    o   Basic and advanced linear models, multivariate modeling, and sampling methods.

    o   Machine learning methods in remote sensing and statistical analysis.

Selected Publications

First author

- Can an environmental policy intervention contribute to the reduction of land conflict? Evidence from the Rural Environmental Registry (SiCAR) in the Brazilian Amazon, Manuscript in progress. (with Schons, S.Z.)
- Assessing the impact of neighboring forest fire on planted forest tree mortality: a study on plantation tree mortality in Latin America, Manuscript in progress. (with Schons, S.Z.)
- Combining machine learning and econometric method to understand household level compliance for forest conservation policy in Brazil, Manuscript in progress. (with Schons, S.Z.)
- Tree Outside Forests and farmer household management of climate change risks in Andhra Pradesh, India. Manuscript to be submitted to *Environment and Development Economics.* (with Schons, S.Z.; Amacher, G.; Cobourn, K.; Gundimeda, H; Wynne, R.; Thomas; V.)

Co-author

- Incentives to Establish Tree Cover on Agricultural Land in Andhra Pradesh India. Manuscript submitted to *Forest Policy and Economics*. (with Schons, S.Z.; Amacher, G.; Cobourn, K.; Gundimeda, H; Wynne, R.; Thomas; V.)
- Incentives to Establish Tree Cover on Agricultural Land in Andhra Pradesh India. Manuscript accepted for publication in the book "Environment and Development Economics: Essays in honour of Rabindra N. Bhattacharya" by Oxford University Press. (with Schons, S.Z.; Amacher, G.; Cobourn, K.; Gundimeda, H; Wynne, R.; Thomas; V. (submitted))
- Tree Outside Forests as a development and climate change mitigation strategy for the State of Andhra Pradesh, India. Manuscript to be submitted to *PNAS*. (with Schons, S.Z.; Amacher, G.; Cobourn, K.; Thomas, V.; Wynne, R.; Kohlin, G.; Gundimeda, H.; Williams, P.; More, S.)
- Is It Time to Register? A Survival Analysis of Smallholders' Decision to Enroll in the Rural Environmental Registry program in the Brazilian. Manuscript in progress for submission to *Land Use Science*. (with Schons, S.Z., Sills, E.O, Menezes, D. P.; Lima, E.; Merry, F.)
- Impact of Water Conservation Policy on Crop Burning Choice: Evidence from India (with Sakshi Upadhyay)