

**EEES 136**  
**ENVIRONMENTAL GOVERNANCE AND EMPIRICAL ANALYSIS**

Term: Winter 2019  
Class meetings: Thursday, 2:00-4:00 pm  
Classroom: Fairchild 113a

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**Course Description:**

This course examines environmental governance through an institutional lens. As such, it seeks to provide students with foundational understanding in what institutional analysis is, in addition to how environmental governance is studied. Content topics include the logic of collective action, governance of common pool resources, community management, environmental policy analysis, market-based instruments, and international agreements. Throughout each of these topics, we will attend to the different methods and ways of knowing represented by the different disciplines that study environmental governance

In this seminar, participants will (1) read and synthesize information on environmental governance from an institutionalist perspective; (2) understand when and why researchers use specific statistical techniques to test hypotheses about environmental governance; (3) create a shared, annotated bibliography of relevant books and articles; and (4) complete an individually determined and relevant projects, in collaboration with the instructor.

**Course Requirements:**

Students who opt to take this course for credit will contribute to the annotated bibliography, present three times, and develop a project with the instructor that builds on their needs and interests. On the first day, we will determine the ideal platform for creating and managing the annotated bibliography as a group. This bibliography can serve to complement reading lists for the participant's comprehensive examinations, should he/she be tested in environmental governance or institutional analysis. In-class presentations will be informal and meant to foster discussion. Possible options for the co-developed project include: writing a draft section or outline for a dissertation proposal, completing a systematic literature review, or designing/conducting empirical research. This project is meant to complement or advance the seminar participant's current course of study.

**Texts:**

All the seminar readings will be available on Canvas. However, I suggest that you consider gaining personal access to the following texts. I consider them foundational to a broad understanding of empirical analysis of institutions and social-environmental outcomes.

Angrist JD, Pischke JS (2009) *Mostly Harmless Econometrics* (Princeton University Press, Princeton).

Hirschman A (1970) *Exit, voice, and loyalty: Responses to declines in firms, organizations, and the state* (Harvard University Press, Cambridge).

Knight J (1992) *Institutions and Social Conflict* (Cambridge University Press)

- North DC (1990) *Institutions, Institutional Change, and Economic Performance* (Cambridge University Press).
- Ostrom E (1990) *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, Cambridge).
- Olson M (1965) *The logic of collective action: Public goods and the theory of groups* (Harvard University Press, Cambridge).
- Scott JC (1998) *Seeing like a state: How certain schemes to improve the human condition have failed* (Yale University Press, New Haven).

And, a few more titles to round out your (electronic?) bookshelves:

- Acemoglu D, Robinson JA (2012) *Why Nations Fail: The Origins of Power, Prosperity and Poverty* (Crown, New York). 1st Ed.
- Agrawal A (2005) *Environmentality* (Duke University Press, Durham).
- Andrews M (2013) *The limits of institutional reform in development: changing rules for realistic solutions* (Cambridge University Press, Cambridge).
- Ellickson RC (2005) *Order without law: How neighbors settle disputes* (Harvard University Press, Cambridge).
- Greif A (2006) *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade* (Cambridge University Press, Cambridge).

I have selected articles for this seminar that are relatively recent, in order to provide an “updated” read on empirical analysis of environmental governance. I expect that seminar participants come having read “Readings,” though I do not expect seminar participants to have read “Optional Readings” for any given week.

### **Disabilities and Religious Observances:**

Students with disabilities should meet with the instructor to discuss the accommodations they require to succeed in the course. Students who need accommodations in order to participate in religious observances that occur during the term should also confer with the instructor.

### **Academic honor:**

Students may discuss homework assignments with each other provided that the work they submit for credit is their own. This means that you should understand each step involved in the solution and be able to reproduce it independently. Papers must be written by the student and reflect his or her own interpretation of the subject matter.

## Weekly Schedule Winter 2019

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### I. Foundations

#### Topic 1 Environmental governance and empirical analysis

##### Main Readings:

- Lemos, M.C., Agrawal, A., 2006. Environmental Governance. *Annu. Rev. Environ. Resour.* 31, 297–325.
- Cox, M., 2015. A basic guide for empirical environmental social science *Ecology and Society* 20.

##### Optional Readings:

- Young OR, et al. (2006) A portfolio approach to analyzing complex human-environment interactions: Institutions and land change. *Ecol Soc* 11(2). doi:10.1890/1052-3175(2006)11[31:ARTN]2.0.CO;2
- Lambin EF, et al. (2014) Effectiveness and synergies of policy instruments for land use governance in tropical regions. *Glob Environ Chang* 28(1):129–140.
- Biermann F, Pattberg P (2008) Global Environmental Governance: Taking Stock, Moving Forward. *Annu Rev Environ Resour* 33(1):277–294.

#### Week 2 Institutional analysis and counterfactual thinking

##### Readings:

- Meyfroidt P. (2016) Approaches and terminology for causal analysis in land systems science. *J Land Use Sci* 11(5):501–522.
- Ostrom, E. (1990) Chapter 2: An institutional approach to the study of self-organization and self-governance in CPR situations. *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, Cambridge).
- Wright GD, Andersson KP, Gibson CC, Evans TP (2016) Decentralization can help reduce deforestation when user groups engage with local government. *Proc Natl Acad Sci* 113(52):14958–14963.

##### Optional Readings:

- Greif A, Kingston C (2011) *Institutions : Rules or Equilibria ?* doi:10.1007/978-3-642-19519-8.
- [Select Chapters] North DC (1990) *Institutions, Institutional Change, and Economic Performance* (Cambridge University Press).
- Ostrom E (2005) Understanding the Diversity of Structured Human Interactions. *Understing Institutional Divers*:3–31.

- Angrist JD, Pischke J-S (2017) Undergraduate Econometrics Instruction: Through Our Classes, Darkly. *J Econ Perspect* 31(2):125–144.

### Topic 3 Social Ecological Systems and testing theories

#### Readings:

- Ostrom E (2009) A general framework for analyzing sustainability of social-ecological systems. *Science* 325(5939):419–22.
- Sabatier PA (2014). Chapter 2 in *Theories of the Policy Process* doi:10.1081/E-EPAP2-120041405.
- [Select and Present: Social-Ecological System Paper of Choice]

#### Optional Readings:

- Folke C, Hahn T, Olsson P, Norberg J (2005) Adaptive Governance of Social-Ecological Systems. *Annu Rev Environ Resour* 30(1):441–473.
- Brondizio ES, Ostrom E, Young OR (2009) Connectivity and the Governance of Multilevel Social-Ecological Systems: The Role of Social Capital. *Annu Rev Environ Resour* 34(1):253–278.

## II. Objectives

### Topic 4 Development (Environmental Income): Measurement and difference-in-difference

#### Readings:

- Alkire S, Roche JM, Vaz A (2017) Changes Over Time in Multidimensional Poverty: Methodology and Results for 34 Countries. *World Dev* 94(2014):232–249.
- Perfecto I, Vandermeer J (2010) The agroecological matrix as alternative to the land-sparing/agriculture intensification model. *Proc Natl Acad Sci U S A* 107(13):5786–91.
- Sunderlin WD, de Sassi C, Ekaputri AD, Light M, Pratama CD (2017) REDD+ contribution to well-being and income is marginal: The perspective of local stakeholders. *Forests* 8(4). doi:10.3390/f8040125.

#### Optional Readings:

- Erbaugh JT, Oldekop JA (2018) Forest landscape restoration for livelihoods and well-being. *Curr Opin Environ Sustain* 32:76–83.
- Henry AD, Vollan B (2014) Networks and the Challenge of Sustainable Development. *Annu Rev Environ Resour* 39(1):583–610.
- Liu J, et al. (2013) Framing Sustainability in a Telecoupled World. *Ecol Soc* 18(2):26.
- Meyfroidt P, Lambin EF (2011) *Global Forest Transition: Prospects for an End to Deforestation* doi:10.1146/annurev-environ-090710-143732.

### Topic 5 Conservation (Environmental Assets): Protected areas and matching analyses

### Readings:

- Ferraro PJ, Hanauer MM (2014) Advances in Measuring the Environmental and Social Impacts of Environmental Programs. *Annu Rev Environ Resour* 39(1):495–517.
- Nolte C, Agrawal A, Silvius KM, Soares-Filho BS (2013) Governance regime and location influence avoided deforestation success of protected areas in the Brazilian Amazon. *Proc Natl Acad Sci* 110(13):4956–4961.
- Agrawal A (2014) Matching and mechanisms in protected area and poverty alleviation research. *Proc Natl Acad Sci* 111(11):3909–3910.

### Optional Readings:

- Agrawal A, Gibson C (1999) The role of community in natural resource conservation. *Enchantment Disen Role Community Nat Resour Conserv* 27(4):629–649.
- Cox M, Arnold G, Tomas SV (2010) A Review of Design Principles for Community-based Natural Resource Management. *Ecol Soc* 15(4):38.
- Joppa LN, Pfaff A (2009) High and far: Biases in the location of protected areas. *PLoS One* 4(12):1–6.
- Waldron A, et al. (2017) Reductions in global biodiversity loss predicted from conservation spending. *Nature*. doi:10.1038/nature24295.

Topic 6 Sustainability (balance of environmental assets and income over time) and panel data analysis

### Readings:

- Ostrom, E. (1990) Chapter 3: Analyzing long-enduring, self-organized, and self-governed CPRs. *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge University Press, Cambridge).
- Turner BL, Robbins P (2008) Land-Change Science and Political Ecology: Similarities, Differences, and Implications for Sustainability Science. *Annu Rev Environ Resour* 33:295–316.
- Meyfroidt P, et al. (2018) Middle-range theories of land system change. *Glob Environ Chang* 53(March):52–67.

### Optional Readings:

- Kajikawa Y, Tacao F, Yamaguchi K (2014) Sustainability science: the changing landscape of sustainability research. *Sustain Sci*:431–438.

## **III. Interventions**

Topic 7 Rules

### Readings:

- Sikor T, et al. (2013) Global land governance: From territory to flow? *Curr Opin Environ Sustain* 5(5):522–527.
- Blackman A, Corral L, Santos E, Asner GP (2017) Titling indigenous communities protects forests in the Peruvian Amazon. doi:10.1073/pnas.1603290114.

Optional Readings:

- Ostrom, E. (2005) “Part II: Focusing on Rules in *Understanding Institutional Diversity*, pp. 135-215.
- Ribot JC, Agrawal A, Larson AM (2006) Recentralizing While Decentralizing: How National Governments Reappropriate Forest Resources. *World Dev* 34(11):1864–1886.
- Ribot JC, Peluso NL (2003) A Theory of Access. *Rural Sociol* 68(2):153–181.

Topic 8 Information provision

Readings:

- Lambin EF, Thorlakson T (2018) Sustainability Standards: Interactions Between Private Actors, Civil Society, and Governments. *Annu Rev Environ Resour* 43(1).
- Auld G, Gulbrandsen LH, McDermott CL (2008) Certification Schemes and the Impacts on Forests and Forestry. *Annu Rev Environ Resour* 33(1):187–211.
- [Select and Present: 3 slides, 5-10 minutes]

Optional Readings:

- Rasmussen LV, Bierbaum R, Oldekop JA, Agrawal A (2017) Bridging the practitioner-researcher divide: Indicators to track environmental, economic, and sociocultural sustainability of agricultural commodity production. *Glob Environ Chang* 42:33–46.

Topic 9 Market incentives

Readings:

- Alix-Garcia J, Wolff H (2014) Payment for Ecosystem Services from Forests. *Annu Rev Resour Econ* 6(1):361–380.
- Agrawal A, Chhatre A, Gerber ER (2015) Motivational Crowding in Sustainable Development Interventions. *Am Polit Sci Rev* 109(03):470–487.
- Jayachandran S, et al. (2017) Cash for carbon: A randomized trial of payments for ecosystem services to reduce deforestation. *Science* (80- ) 357(6348):267–273.

Optional Readings:

- Guha-Khasnobis B, Kanbur R, Ostrom E (2006) *Linking the formal and informal economy: Concepts and policies* (Oxford University Press, Oxford).
- Sesnie SE, et al. (2017) A spatio-temporal analysis of forest loss related to cocaine trafficking in Central America. *Environ Res Lett* 12(5). doi:10.1088/1748-9326/aa6fff.

## Topic 10 Limitations

### Readings:

- Merry SE (2016) Chapter One: A world of quantification in *The seductions of quantification* (University of California Press, Chicago)  
OR
- Jerven M (2013) Introduction. *Poor numbers: How we are misled by African development statistics and what to do about it* (Cornell University Press, London).
- [Select and present from previous readings: 3 slides, 5 minutes]

### Optional Readings:

- Hajjar R, et al. (2016) The data not collected on community forestry. *Conserv Biol* 30(6):1357–1362.
- Coomes OT, Macdonald GK, Le Y, Waroux PDE (2018) Geospatial Land Price Data : A Public Good for Global Change Science and Policy.
- Phung TD, Hardeweg B, Praneetvatakul S, Waibel H (2013) Non-Sampling Error and Data Quality: What Can We Learn from Surveys to Collect Data for Vulnerability Measurements? *World Dev* 71:25–35.
- Stevanov M, Dobšinska Z, Surový P (2014) Assessing survey-based research in forest science: Turning lemons into lemonade? *For Policy Econ* 68:105–117.