

# Annotated Sample Course Outline of ENRE

## Week 1 – Course Presentation

- Human experiences of environmental problems and environmental policy depend on systematic structures economic inequality within and across countries (Examples 1, 2, 3, and 4; Banzhaf et al.)
- Goal of this syllabus is to highlight where works of ENRE might unintentionally uphold status quo practices of injustice (Ando et al.)
- We provide resources that weave structural inequities and injustices into the discussion of every ENRE topic and wherever possible suggest alternative solutions
  - a. Overview of the Course
  - b. Why this course?
  - c. Examples:
    - 1. *2010 Deepwater Horizon*
    - 2. *Example 2: Bhopal Gas Tragedy*
    - 3. *Example 3: Water crises in Chennai*
    - 4. *Hurricane categories explained: ABC News? Hurricane Melissa?*

Heal, Endangered Economies, Chapter 1: *Environment and Economy – No Conflict.*

UN's Sustainable Development Goals Report, 2018

Banzhaf S., Ma L., and Timmins, C. (2019). Environmental Justice: The Economics of Race, Place and Pollution. *Journal of Economic Perspectives*, 33 (1), 185 – 208.

Ando, A., Awokuse, T. O., Chan, N. W., Gonzalez-Ramirez, J., Gulati, S., Interis, M. G., Jacobsen, S., Manning, D. T., and Stolper, S. (2024). Environmental and Natural Resource Economics and Systemic Racism. *Review of Environmental Economics and Policy*, 18 (1).

## Week 2 – Markets and Welfare

- Measures of benefit based on neoclassical concepts of Willingness to Pay (WTP) are dependent on income and caste structures within a society (Ando et al.)
- Sole focus on Economic Efficiency to shape environmental policy ignores community-specific effects that may exacerbate structural injustices
  - a. Demand and Marginal Benefit; WTP and ATP
  - b. Supply and Marginal Cost
  - c. Competitive Equilibrium and Net Benefits
  - d. Welfare Theorems
  - e. Discounting

Keohane & Olmstead: Chapter 2 and 4.

Ando, A., Awokuse, T. O., Chan, N. W., Gonzalez-Ramirez, J., Gulati, S., Interis, M. G., Jacobsen, S., Manning, D. T., and Stolper, S. (2024). Environmental and Natural Resource Economics and Systemic Racism. *Review of Environmental Economics and Policy*, 18 (1).

### **Week 3 – Environmental Problems and Incentive Failures**

- Minority and low-income communities often experience greater burdens from environmental problems generated mostly by the wealthy (Sager)
- Hardin's concept of Tragedy of the Commons conflates the scarcity of a resource with the governance of the resource resulting in the proposal of inhuman solutions such as government-imposed limits on birth (Frischmann et al.)
  - a. Market Failures
  - b. Externalities
  - c. Types of Goods: Public Goods
  - d. The Problem of the Commons

Keohane & Olmstead: Chapter 5.

Heal, Endangered Economies, Chapter 2: *Market Mistakes and How Unpaid-For External Effects are Killing Us.*

Sager, L. (2025). Global Air Inequality over 2000-2020. *Journal of Environmental Economics and Management*: 130, 103112.

Frischmann, B. M., Marciano, A., and Ramello, G. B. (2019). Retrospectives: Tragedy of the Commons after 50 Years. *Journal of Economic Perspectives*. 33 (4): 211-228.

### **Week 4 – Environmental Justice and Equity (Environmental Problems and Incentive Failures)**

- Comparing Various Contaminant Exposures across communities using percentile of exposures using the data from EJSCREEN
  - a. Environmental Equity Measures (Contaminant Exposure Percentiles)
  - b. Data sources (EJSCREEN)

Sager, L. (2025). Global Air Inequality over 2000-2020. *Journal of Environmental Economics and Management*: 130, 103112.

Banzhaf S., Ma L., and Timmins, C. (2019). Environmental Justice: The Economics of Race, Place and Pollution. *Journal of Economic Perspectives*, 33 (1), 185 – 208.

Resource Radio Podcast (2023): Bringing Environmental Justice into Government Rulemaking, with Ann Wolverton, <https://just-enviro-econ.github.io/media/bringing-ej-into-govt-rulemaking>.  
EJSCREEN: <https://screening-tools.com/epa-ejscreen>.

### **Week 5 – Economic Theory II (Environmental Problems and Incentive Failures)**

- To address structural injustices, environmental policies must explicitly prioritize improving the equity of policy outcomes (Li; Krupnick et al.)
- Coase Theorem proposed formalization of property rights often leads to violations of procedural and distributive justice when implemented in Colonial contexts such as the case of Uganda (Murphy et al.)
- Community Governance addresses and mitigates structural injustices (Ostrom and Madhok)
  - a. Cost-effectiveness, Equity and Environmental justice
  - b. Taxes and Subsidies
  - c. Tradable Permits

- d. Prices Vs Quantity regulation
- e. Property Rights and Coase Theorem
- f. Community Governance

Keohane & Olmstead: Chapters 8 and 10.

Ostrom, Governing the Commons, Chapter 3.

Dietz, S. (2010). The equity-efficiency trade-off in environmental policy: evidence from stated preferences. *Land Economics*, 86 (3), 423 – 443.

#### *Case Studies*

Murphy, S., Carmody, P., and Okawakol, J. (2017). When rights collide: land grabbing, force and injustice in Uganda. *Journal of Peasant Studies*, 44 (3): 677-696.

Krupnick, A., Robertson, M., Look, W., Bautista, E., Sanders, V., Ko, E., Shawhan, D., Linn, J., Jaller, M., Rao, N., Cazenave, M. P., Zhang, Y., Chen, K., and Wang, P. (2023), Prioritizing Justice in New York State Climate Policy: Cleaner Air for Disadvantaged Communities? Resources for the Future and NYC Environmental Justice Alliance, *Climate Justice Report 23-12. Podcast*.

Madhok, R. (2025). Infrastructure, Institutions, and the Conservation of Biodiversity in India. *Journal of the Association of Environmental and Resource Economists. Podcast*.

Li, L. (2023). Environmental Goods Provision and gentrification: Evidence from MillionTreesNYC. *Journal of Environmental Economics and Management* 120, 102828.

#### **Week 6 – Cost-benefit analysis and Valuation**

- Our methods underrepresent preferences and values for minority and ethnic communities often forced to live in neighborhoods with poorer access to environmental amenities or work in jobs with lower wages due to systemic injustices
- Hedonic Models of valuation assume the ability to sort freely across housing markets and jobs which might not be true for many minority communities (Ando et al.)
- Travel Cost Methods assume that all people have access to vehicles or can afford to fly to visit recreation sites which is not true for minorities, thus producing lower value estimates for ethnic minorities
- Hedonic methods can be used to examine a program's impact on gentrification (Li)
- Cost-Benefit Analysis is one tool amongst many in analyzing public decisions (Steven-kelman; Farrow)
  - a. Cost benefit analysis
  - b. Methods of Valuation
  - c. Equity issues in Methods

Li, L. (2023). Environmental Goods Provision and gentrification: Evidence from MillionTreesNYC. *Journal of Environmental Economics and Management* 120, 102828.

Ando, A., Awokuse, T. O., Chan, N. W., Gonzalez-Ramirez, J., Gulati, S., Interis, M. G., Jacobsen, S., Manning, D. T, and Stolper, S. (2024). Environmental and Natural Resource Economics and Systemic Racism. *Review of Environmental Economics and Policy*, 18 (1).

Farrow, S. (2013). How (Not) to Lie with Benefit-Cost Analysis. *The Economists' Voice*, 10 (1): 45-50.

Kelman, S. (1981). Cost-Benefit Analysis: An Ethical Critique. *Regulation*, 5: 33-40.