

The Economics of Natural Resources

Institut für Volkswirtschaftslehre
Summer Semester 2024



Content

To understand the natural world we live in aids the efforts to tackle important environmental challenges such as climate change. Economic perspectives on the issue can specifically shed light on how natural resources have been- and can be more sustainably managed. This seminar covers both long standing and current topics in Natural Resources Economics. As the starting point, socio-economic roles of the main resources air, water, land and biodiversity are discussed via a collection of rigorous empirical papers studying different regions worldwide. The seminar then extends the dialogue to the intervention frontiers where green technologies, social coordination and environmental regulation design are explored. Besides providing the subject matter knowledge, the seminar aims to encourage and train students to conduct independent, original economic research through scientific paper evaluation, own data analysis and presentation of findings.

Prerequisites

Basic knowledge of Microeconomics and Macroeconomics is required. Prior knowledge of Public Economics/Environmental Economics/Development Economics is helpful. Knowledge of Statistics/Econometrics is required to understand the empirical literature.

Requirements

The following are required from seminar participants:

- Attendance at the kick-off meeting
- At least one consultation meeting with the instructor
- Seminar presentation (20-minute presentation and 10-minute discussion)
- Active participation and contribution to other presentations
- Submission of the term paper (10-12 pages)

Each seminar topic (see below) is accompanied by a list of suggested literature. Each paper may focus on a different sub-topic. The selected literature should first be discussed in detail in student's term paper: What is the research question? What are the hypotheses? Which methods are used? What are the results?. Subsequently, an independent extension of the findings is to be made. Examples might include: comparison with recent research literature, independently extending the analyses to more recent time point, replicating the results using data from a different temporal or geographic context, or deriving and discussing economic or social policy measures.

Student's research plan should be discussed with the instructor. In the kick-off meeting, information about the seminar schedule is given and the seminar topics are distributed. In addition, helpful hints are given on how to conduct and write a research paper. The

seminar language is English. The guidelines for scientific papers at the Institute of Economics can be found **here**. The formal guidelines must be strictly adhered to. Formal aspects are part of the evaluation of the term paper.

Registration

Students can register for the seminar via Stud.IP from 05.03.2024.

Important dates

- from 05.03.2024: Registration via Stud.IP
- 12.04.2024: Kick-off meeting and topic distribution (10:00-11:30, VWL institute)
- Until 21.06.2024: At least one consultation meeting with the instructor
- 28.06.2024: Block seminar, presentation (from 9:00, VWL institute)
- 01.08.2024: Submission deadline for the term paper (until end of day, via E-mail)

Seminar topics and literature

Please note that each suggested paper within a topic can function as the foundation for the student's own research.

1. The Economics of Air

- Chang, T., Graff Zivin, J., Gross, T., & Neidell, M. (2016). Particulate pollution and the productivity of pear packers. *American Economic Journal: Economic Policy*, 8(3), 141-169. DOI:10.1257/po1.20150085
- Deryugina, T., Heutel, G., Miller, N. H., Molitor, D., & Reif, J. (2019). The mortality and medical costs of air pollution: Evidence from changes in wind direction. *American Economic Review*, 109(12), 4178-4219. DOI:10.1257/aer.20180279
- Barwick, P. J., Li, S., Lin, L., & Zou, E. (2019). From fog to smog: The value of pollution information (No. w26541). National Bureau of Economic Research. <https://www.nber.org/papers/w26541>

2. The Economics of Water

- Blakeslee, D., Fishman, R., & Srinivasan, V. (2020). Way down in the hole: Adaptation to long-term water loss in rural India. *American Economic Review*, 110(1), 200-224. DOI:10.1257/aer.20180976
- Garg, T., Hamilton, S. E., Hochard, J. P., Kresch, E. P., & Talbot, J. (2018). (Not so) gently down the stream: River pollution and health in Indonesia. *Journal of Environmental Economics and Management*, 92, 35-53. <https://doi.org/10.1016/j.jeem.2018.08.011>
- Keiser, D. A., & Shapiro, J. S. (2019). Consequences of the Clean Water Act and the demand for water quality. *The Quarterly Journal of Economics*, 134(1), 349-396. <https://doi.org/10.1093/qje/qjy019>

3. The Economics of Land

- Jedwab, R., Barr, J., & Brueckner, J. K. (2022). Cities without skylines: Worldwide building-height gaps and their possible determinants and implications. *Journal of Urban Economics*, 132, 103507. <https://doi.org/10.1016/j.jue.2022.103507>
- Balboni, C., Berman, A., Burgess, R., & Olken, B. A. (2023). The economics of tropical deforestation. *Annual Review of Economics*, 15, 723-754. <https://doi.org/10.1146/annurev-economics-090622-024705>

4. Biodiversity

- Taylor, M. S. (2021). Trade, competitive exclusion, and the slow-motion extinction of the Southern Resident Killer Whales (No. w29014). National Bureau of Economic Research. <https://www.nber.org/papers/w29014>
- Raynor, J. L., Grainger, C. A., & Parker, D. P. (2021). Wolves make roadways safer, generating large economic returns to predator conservation. *Proceedings of the National Academy of Sciences*, 118(22). <https://doi.org/10.1073/pnas.2023251118>

5. Green Technology and Social Coordination

- Barton-Henry, K., Wenz, L., & Levermann, A. (2021). Decay radius of climate decision for solar panels in the city of Fresno, USA. *Scientific Reports*, 11(1), 8571. <https://doi.org/10.5281/zenodo.4676430>
- Aker, J. C., & Jack, B. K. (2023). Harvesting the rain: The adoption of environmental technologies in the Sahel. *Review of Economics and Statistics*, 1-52. https://doi.org/10.1162/rest_a_01404

6. Environmental Regulation

- Greenstone, M., & Hanna, R. (2014). Environmental regulations, air and water pollution, and infant mortality in India. *American Economic Review*, 104(10), 3038-3072. DOI:10.1257/aer.104.10.3038
- Shapiro, J. S., & Walker, R. (2018). Why is pollution from US manufacturing declining? The roles of environmental regulation, productivity, and trade. *American Economic Review*, 108(12), 3814-3854. DOI:10.1257/aer.20151272
- Ben-David, I., Jang, Y., Kleimeier, S., & Viehs, M. (2021). Exporting pollution: where do multinational firms emit CO2?. *Economic Policy*, 36(107), 377-437. <https://doi.org/10.1093/epolic/eiab009>

Seminar Organization

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