Course Syllabus

ENVIRON 640 & PUBPOL 585: Climate Change Economics and Policy

Spring, 2026
M/W 8:30-9:45 AM, LSRC A247

Professor	Yichun Fan
Office	Grainger Hall 4101
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Office Hours	Monday 9:45-10:45 AM Wednesday 4-5 PM (at GH 4101)
Teaching Assistant	Xingchen Chen
Office Hours	Wednesday 11 AM-12 PM (at GH 4100)
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Office Hours	Tuesday 3 PM – 4 PM (at GH 3100)

Course Overview:

Global climate change is one of the most pressing environmental challenges of the 21st century. If left unchecked, the continued accumulation of greenhouse gases (GHGs) is projected to raise global temperatures by approximately 2 to 5 °C (4 to 9 °F) by the end of this century, with associated impacts on the environment, economy, and society. Because greenhouse gas emissions stem from virtually every type of economic activity—driving cars, heating homes, operating steel mills, raising livestock—any policy designed to reduce emissions or mitigate its negative impacts will necessarily have wide-ranging economic consequences.

This course explores the economics of climate change and related public policies. Key topics include the social cost of carbon, the design and evaluation of climate mitigation policies across sectors, the economics of climate adaptation, and, briefly, the role of climate finance and climate justice. Students will engage with conceptual and methodological topics from cutting-edge economic research, as well as with policy debates in the United States and globally. By the end of the course, students will have gained a deeper understanding of the economic dimensions of climate change and developed practical skills in applying economic analysis to generate quantitative evidence that supports climate policies and strategies in both the public and private sectors.

Format:

The course is a lecture course. Questions and discussions are encouraged with bonus points (up to 5%) towards final grades.

Prerequisites:

One semester of microeconomics and statistics.

Students should be familiar with basic microeconomic concepts such as supply and demand, consumer/producer surplus and deadweight loss, opportunity cost, marginal analysis, and time discounting. Students are also expected to have basic statistical knowledge to understand regression tables from empirical research.

Course Grades:

The grade is based on the weighted average of scores on attendance, problem sets, midterm exam, and final group project.

Attendance	10% (5% Bonus)
Problem Sets	30%
Midterm Exam	30%
Final Project	30%
Total	100%

Problem Sets are due at the time and date indicated on the course website. Each student has **three "late-days"** to use over the semester. If you need to use the late day due to illness or other circumstances, please inform the teaching team before the due date. Late assignments without prior notice or beyond the three "late days" will not be accepted. To avoid the risk of earning no points on a problem set, please do not wait until the last minute to submit.

AI Policy

The goal of this course is to help you master the material and develop the ability to find solutions to new challenges that may not yet have standard answers. Collaboration with peers and the thoughtful use of AI will be important parts of your learning process and valuable tools for your future careers. If discussing problems with classmates or using AI helps you gain a deeper understanding, I encourage you to do so. However, simply copying answers from AI or from your classmates is considered cheating and will not support your learning. **If you use AI tools or collaborate with classmates on a problem, please include a brief note at the beginning of your problem set describing the role of that collaboration.** If I find evidence of direct reliance on AI-generated answers without such a note, your grade for the problem set will be penalized.

Nicholas School Honor Code

All activities of Nicholas School students, including those in this course, are governed by the Duke Community Standard, which states:

Duke University is a community dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect, and accountability. Citizens of this community commit to reflect upon and uphold these principles in all academic and nonacademic endeavors, and to protect and promote a *culture of integrity. To uphold the Duke Community Standard, students sign the following pledge on assignments and exams:*

- *I will not lie, cheat, or steal in my academic endeavors;*
- *I will conduct myself honorably in all my endeavors; and*
- *I will act if the Standard is compromised.*

All students should be familiar with the additional detail on application of the Duke Community Standard in the Nicholas School found at https://nicholas.duke.edu/about/policies/nicholas-school-honor-code.

Textbooks

These texts can be accessed online via Duke Library. In the reading list, when noted as [TEXT], it refers to textbooks below. These books help you understand the course concept but are not required.

- Keohane, Nathaniel, and Sheila Olmstead (2016). *Markets and the Environment.* Second Edition. Washington: Island Press.

- Tol, R. S. (2019). *Climate economics: economic analysis of climate, climate change and climate policy.* Second Edition. Edward Elgar Publishing.

Schedule

Lecture topics and associated readings are listed by date below.

Sections	Lectures	Date	Topic
1	Introduction		
	1	January 7	Introduction to Climate Science, Economics, and Policy
2	Essential Methods for Economic Analysis of Climate Change		
	2	January 12	Externality and Cost Benefit Analysis
	3	January 14	Benefit Estimation (*Pset 1 release*)
	4	January 21	Social Cost of Carbon
	5	January 26	Cost Estimation
			Problem Set 1 (DDL: Jan 26 at 11:59 PM)
	6	January 28	Discounting
	7	February 2	Uncertainty (*Pset 2 release*)
3	Economics of Climate Mitigation		
	8	February 4	Climate Mitigation Policies: Economic Theory

	9	February 9	Carbon Pricing
	10	February 11	Sector-specific: Energy and Electricity
	11	February 16	Sector-specific: Transportation
			Problem Set 2 (DDL: Feb 16 at 11:59 PM)
	12	February 18	Sector-specific: Building
	13	February 23	Behavioral Climate Policy
	14	February 25	Carbon Offsets
		March 2	*In-class Midterm Exam*
		March 4	*Midterm Debrief + Final Project Introduction*
4	Economics of Climate Adaptation		
	15	March 16	Climate Adaptation Overview
	16	March 18	Information (*Pset 3 release*)
	17	March 23	Real Estate
	18	March 25	Infrastructure and Public Spending
	19	March 30	Insurance and Reinsurance
	20	April 1	Climate Adaptation Finance
			Problem Set 3 (DDL: Apr 1 at 11:59 PM)
5	Emerging Topics in Climate Economics		
	21	April 6	Spatial Regulation: Correlated Air Pollutants and Resource Management
	22	April 8	Climate Inequality and International Agreement
		April 13, 15	*Final Project Presentation*

Readings

The readings are highly recommended but not required. View them as supplemental resources that you can consult if something is unclear or if you wish to learn more about a particular topic.

Date	Topic and Readings
January 7	Introduction

	- [TEXT] Tol, Richard (2019). Chapter 1. - Prasad Kasibhatla's Coursera Course: Climate Science for Everyone. https://www.coursera.org/teach/climate-science-everyone/ (Duke students can enroll for free) - Intergovernmental Panel on Climate Change. Summary for Policymakers: The Physical Science Basis Contribution of Working Group I to the Sixth Assessment Report of the IPCC. Cambridge University Press, Cambridge, UK and New York, 2021. - Burke, et al (2016). Climate Economics. Opportunities for advances in climate change economics. *Science*, *352*(6283), 292–293.
January 12	Externality and Cost Benefit Analysis - [TEXT] Keohane, N.O. and Olmstead, S.M. (2016). Chapter 3-4. - Arrow, K. J., Cropper, M. L., Eads, G. C., Hahn, R. W., Lave, L. B., Noll, R. G., Portney, P. R., Russell, M., Schmalensee, R., Smith, V. K., & Stavins, R. N. (1996). Is there a role for benefit-cost analysis in environmental, health, and safety regulation? *Science*, *272*(5259), 221–222. - Hendren, N., & Sprung-Keyser, B. (2022). The case for using the MVPF in empirical welfare analysis (No. w30029). *National Bureau of Economic Research*. - Hahn, R., Hendren, N., Metcalfe, R., & Sprung-Keyser, B. (2024). *A welfare analysis of policies impacting climate change* (No. w32728). National Bureau of Economic Research. https://doi.org/10.3386/w32728 - IPCC (2018) Global Warming of 1.5°C. Summary for Policymakers. https://www.ipcc.ch/sr15/chapter/spm/ . - Murphy, Robert P. (2018) William Nordhaus versus the United Nations on Climate Change Economics. https://www.econlib.org/library/Columns/y2018/MurphyNordhaus.html
January 14	Benefit Estimation Hedonic Pricing: - Rosen, S. (1974). Hedonic prices and implicit markets: product differentiation in pure competition. *Journal of Political Economy*, 82(1), 34-55. - Chay, K. Y., & Greenstone, M. (2005). Does air quality matter? Evidence from the housing market. *Journal of Political Economy*, 113(2), 376-424 - Albouy, D., Graf, W., Kellogg, R., & Wolff, H. (2016). Climate amenities, climate change, and American quality of life. *Journal of the Association of*

	Environmental and Resource Economists, 3(1), 205-246. - Bishop, K. C., Kuminoff, N. V., Banzhaf, H. S., Boyle, K. J., von Gravenitz, K., Pope, J. C., Smith, V. K., & Timmins, C. D. (2020). Best Practices for Using Hedonic Property Value Models to Measure Willingness to Pay for Environmental Quality. *Review of Environmental Economics and Policy*, 14(2), 260–281. - Fairweather, D., Kahn, M., Metcalfe, R., & Olascoaga, S. S. (2024). Expecting climate change: A nationwide field experiment in the housing market (No. w33119). *National Bureau of Economic Research.* Travel Cost: - Phaneuf, D. J., & Smith, V. K. (2005). Recreation demand models. *Handbook of environmental economics*, 2, 671-761. - Gellman, J., Walls, M., & Wibbenmeyer, M. (2025). Welfare losses from wildfire smoke: Evidence from daily outdoor recreation data. *Journal of Environmental Economics and Management,* 103166, 103166. Defensive Behaviors: - Bartik, T. J. (1988). Evaluating the benefits of non-marginal reductions in pollution using information on defensive expenditures. *Journal of environmental economics and management*, 15(1), 111-127. - Ito, K., & Zhang, S. (2020). Willingness to Pay for Clean Air: Evidence from Air Purifier Markets in China. *The Journal of Political Economy*, *128*(5), 1627–1672. - Fan, Y. (2024). Social cost of lifestyle adaptation: Air pollution and outdoor physical exercise. *Journal of Environmental Economics and Management*, 127(103042), 103042. Contingent Valuation: - Carson, Richard T. "Contingent Valuation: A Practical Alternative when Prices Aren't Available." *Journal of Economic Perspectives* 26(4) 2012
January 21	Social Cost of Carbon Value of Statistical Life: - Cameron, “Euthanizing the Value of a Statistical Life.” *Review of Environmental Economics and Policy* 4(2), 2010 Social Cost of Carbon: - Rennert, K., Errickson, F., Prest, B. C., Rennels, L., Newell, R. G., Pizer, W., Kingdon, C., Wingenroth, J., Cooke, R., Parthum, B., Smith, D., Cromar, K., Diaz, D., Moore, F. C., Müller, U. K., Plevin, R. J., Raftery, A. E., Ševčíková, H., Sheets, H., … Anthoff, D. (2022). Comprehensive evidence implies a higher social cost of CO_2. *Nature*, *610*(7933), 687–692. - Lemoine, D., Hausman, C., & Shrader, J. G. (2025). A Guide to Climate Damages (No. w34348). National Bureau of Economic Research.

	- Carleton, T., Jina, A., Delgado, M., Greenstone, M., Houser, T., Hsiang, S., Hultgren, A., Kopp, R. E., McCusker, K. E., Nath, I., Rising, J., Rode, A., Seo, H. K., Viaene, A., Yuan, J., & Zhang, A. T. (2022). Valuing the Global Mortality Consequences of Climate Change Accounting for Adaptation Costs and Benefits. *The Quarterly Journal of Economics*, *137*(4), 2037–2105. - Dell, Melissa, Benjamin F. Jones, and Benjamin A. Olken (2012) Temperature shocks and economic growth: Evidence from the last half century. *American Economic Journal: Macroeconomics* 4.3: 66-95. - Nordhaus (2013). *DICE 2013R: Introduction and User's Manual*. Sections I and II (pages 3-6). - Congressional Budget Office (CBO) (2003). The economics of climate change. Chapter 3 in *The Economics of Climate Change: A Primer*. Washington, DC: CBO. pp 1-4. - Committee on Assessing Approaches to Updating the Social Cost of Carbon (2017). *Valuing Climate Damages*. Executive Summary and Structure of the Estimation Process (pages 1-3 and 39-43).
January 26	Cost Estimation - IPCC (2014). Technical Summary in: Climate Change 2014: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Figure TS.12 & page 59. - Per-Anders Enkvist, Tomas Nauclér, and Jerker Rosander (2007). A cost curve for greenhouse gas reduction. *McKinsey Quarterly*. Exhibit 1. - Hughes, J. E., & Podolefsky, M. (2015). Getting green with solar subsidies: Evidence from the California solar initiative. *Journal of the Association of Environmental and Resource Economists*, *2*(2), 235–275. - Knittel, C. R. (2010). The implied cost of carbon dioxide under the cash for clunkers program. *SSRN Electronic Journal*. - Kaufman and Krause (2017). The economic impacts of the Clean Power Plan. *WRI*. (Pages 1-8) - EPA (2014). Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants. - Gillingham, K., & Tsvetanov, T. (2019). Hurdles and steps: Estimating demand for solar photovoltaics. *Quantitative Economics*, *10*(1), 275–310.

January 28 & February 2	Discounting and Uncertainty - Pizer, W. A., & Prest, B. C. (2025). Circular A-4: Practical advances in discounting for policy decisions. *Review of Environmental Economics and Policy*, 19(2), 229–237. - Groom, B., Drupp, M. A., Freeman, M. C., & Nesje, F. (2022). The future, now: A review of social discounting. *Annual Review of Resource Economics*, 14(1), 467–491. - Pindyck, R. S. (2021). What we know and don't know about climate change, and implications for policy. *Environmental and Energy Policy and the Ec*onomy, 2, 4–43. - Nordhaus, W.D. (2011). The Economics of Tail Events with an Application to Climate Change. *Review of Environmental Economics and Statistics* 5(2). - Weitzman, M.L. (2011). Fat-Tailed Uncertainty in the Economics of Catastrophic Climate Change. *Review of Environmental Economics and Statistics* 5(2). pp 275-292 - Pindyck, R.S. (2011). Fat Tails, Thin Tails, and Climate Change Policy. *Review of Environmental Economics and Statistics* 5(2). pp 258-274
February 4	Climate Mitigation Policies: Economic Theory - [TEXT] Keohane, N.O. and Olmstead, S.M. (2016). Chapter 8-9. - Stavins, R. N. (2022). The relative merits of carbon pricing instruments: Taxes versus trading. *Review of Environmental Economics and Policy*, *16*(1), 62–82. - Weitzman, M. L. (1974). Prices vs. Quantities. *The Review of Economic Studies*, *41*(4), 477. - Meng, K. C., & Thivierge, V. (2025). Do Environmental Markets Improve Allocative Efficiency? Evidence from U.S. Air Pollution (No. w34111). *National Bureau of Economic Research*.
February 9	Carbon Pricing - Stavins, R. N. (2022). The relative merits of carbon pricing instruments: Taxes versus trading. *Review of Environmental Economics and Policy*, *16*(1), 62–82. - Schmalensee, R. and Stavin, R.N. (2017) Lessons Learned from Three Decades of Experience with Cap and Trade. *Review of Environmental Economics and Policy* 11(1). - Metcalf, G. E. (2021). Carbon taxes in theory and practice. *Annual Review of Resource Economics*, 13(1), 245–265.

	- Stavins, R. N. (2020) The Future of U.S. Carbon-Pricing Policy. *Environmental and Energy Policy and the Economy*, volume 1, pp. 8-64. University of Chicago Press, 2020 - Cui, J., Wang, C., Zhang, J., & Zheng, Y. (2021). The effectiveness of China's regional carbon market pilots in reducing firm emissions. *Proceedings of the National Academy of Sciences of the United States of America*, *118*(52), e2109912118. - Goulder, L. H. (1995). Environmental taxation and the double dividend: A reader's guide. *International Tax and Public Finance,* 2(2), 157–183.
	Policy Interaction, Innovation, Leakage and Competitiveness - Global Climate Policy Project. (2025). Building a Climate Coalition: Aligning Carbon Pricing, Trade, and Development (Flagship Report of the Global Climate Policy Project Working Group on Climate Coalitions). Harvard & MIT: Salata Institute for Climate and Sustainability. - Zhu, J., Fan, Y., Deng, X., & Xue, L. (2019). Low-carbon innovation induced by emissions trading in China. *Nature Communications*, *10*(1), 4088. - Ambec et al (2013). The Porter Hypothesis at 20: Can Environmental Regulation Enhance Innovation and Competitiveness. *Review of Environmental Economics and Policy*. Pages 1-9. - Dechezleprêtre, A., Nachtigall, D., & Venmans, F. (2023). The joint impact of the European Union emissions trading system on carbon emissions and economic performance. *Journal of Environmental Economics and Management*, *118*(102758), 102758. - Böhringer, C., Rosendahl, K. E., & Storrøsten, H. B. (2025). Measures against carbon leakage: Combining output-based allocation with consumption taxes. *Journal of the Association of Environmental and Resource Economists*, *12*(6), 1601–1634. - Clausing, K., Colmer, J., Hsiao, A., & Wolfram, C. (2025). The global effects of carbon border adjustment mechanisms (No. w33723). *National Bureau of Economic Research*.
February 11	Sector-specific: Energy and Electricity - Schwerhoff, G. (2024, October 4). *The Economics of Decarbonizing Electricity Production*. IMF. - Borenstein, S., & Bushnell, J. B. (2022). Do Two Electricity Pricing Wrongs Make a Right? Cost Recovery, Externalities, and Efficiency. *American Economic Journal: Economic Policy*, *14*(4), 80–110.

	- Ito, K. (2014). Do consumers respond to marginal or average price? Evidence from nonlinear electricity pricing. *American Economic Review*, *104*(2), 537–563. - Gerarden, T., Newell, R. G., & Stavins, R. N. (2015). Deconstructing the energy-efficiency gap: Conceptual frameworks and evidence. *American Economic Review*, *105*(5), 183–186. - Darmstadter, J. (2003). The energy-CO2 connection: A review of trends and challenges. Chapter 1 of Climate Change Economics and Policy: An RFF Anthology. Washington: RFF. Determinants of CO2 Emission Trends (pages 11-13). - IEA (2024). *World Energy Outlook 2024.* - Hitchcock, I., & Cahoon, M. (2025, June 2). Hyperscaler Data Center Buildout: A Sustainability Bane, Boon, or Both? Nicholas Institute.
February 16	Sector-specific: Transportation - Acemoglu, D., Aghion, P., Bursztyn, L. & Hemous, D. (2012). The environment and directed technical change. *American Economic Review, 102*(1), 131–166. - Way, R., Ives, M. C., Mealy, P., & Farmer, J. D. (2022). Empirically grounded technology forecasts and the energy transition. *Joule*, *6*(9), 2057–2082. - Barwick, P. J., Kwon, H.-S., Li, S., & Zahur, N. (2025). Drive down the cost: Learning by doing and government policies in the global EV battery industry (No. w33378). *National Bureau of Economic Research*. - Gillingham, K. (2018). Policy Brief: The Rebound Effect and the Rollback of Fuel Economy Standards. - Holland, S. P., Mansur, E. T., Muller, N. Z., & Yates, A. J. (2016). Are There Environmental Benefits from Driving Electric Vehicles? The Importance of Local Factors. *American Economic Review*, *106*(12), 3700–3729. - Wang, J., & Xing, J. (2023). Subsidizing Industry Growth in a Market with Lemons: Evidence from the Chinese Electric Vehicle Market. - Shaffer, B., Auffhammer, M., & Samaras, C. (2021). Make electric vehicles lighter to maximize climate and safety benefits. *Nature*, *598*(7880), 254-256. - Peters, J. F., Burguillo, M., & Arranz, J. M. (2021). Low emission zones: Effects on alternative-fuel vehicle uptake and fleet CO2 emissions. *Transportation Research. Part D, Transport and Environment*, *95*(102882), 102882.

	- Howard, H. (2024, May 28). Congestion Pricing Could Bring Cleaner Air. But Maybe Not for Everyone. *The New York Times*.
February 18	Sector-specific: Building - Eichholtz, P., Kok, N., & Quigley, J. M. (2010). Doing Well by Doing Good? Green Office Buildings. *American Economic Review*, *100*(5), 2492–2509. - Brounen, D., & Kok, N. (2011). On the economics of energy labels in the housing market. *Journal of Environmental Economics and Management*, *62*(2), 166–179. - Fuerst, F., McAllister, P., Nanda, A., & Wyatt, P. (2015). Does energy efficiency matter to home-buyers? An investigation of EPC ratings and transaction prices in England. *Energy Economics*, *48*, 145–156. - van der Kroft, B., Palacios, J., Rigobon, R., & Zheng, S. (2024). Timing sustainable engagement in real asset investments. *SSRN Electronic Journal*.
February 23	Behavioral Climate Policy - Chetty, R. (2015). Behavioral Economics and Public Policy: A Pragmatic Perspective. *The American Economic Review*, *105*(5), 1–33. - Thaler, R. H. (2016). Behavioral economics: Past, present, and future. *The American Economic Review*, *106*(7), 1577–1600. - Fowlie, M., Greenstone, M., & Wolfram, C. (2018). Do Energy Efficiency Investments Deliver? Evidence from the Weatherization Assistance Program. *Quarterly Journal of Economics*, 133(3), 1597–1644. - Fowlie, M., Greenstone, M., & Wolfram, C. (2015). Are the Non-monetary Costs of Energy Efficiency Investments Large? Understanding Low Take-Up of a Free Energy Efficiency Program. *American Economic Review*, 105(5), 201–204. - Allcott, H., & Knittel, C. (2019). Are Consumers Poorly Informed about Fuel Economy? Evidence from Two Experiments. *American Economic Journal: Economic Policy*, *11*(1), 1–37. - Ito, K., Ida, T., & Tanaka, M. (2018). Moral Suasion and Economic Incentives: Field Experimental Evidence from Energy Demand. *American Economic Journal: Economic Policy*, 10(1), 240–267. - Ito, K., & Zhang, S. (2025). Do consumers distinguish fixed cost from variable cost? “schmeduling” in two-part tariffs in energy. *American Economic Journal. Economic Policy*, *17*(2), 194–223.

	- Allcott, H., & Kessler, J. B. (2019). The Welfare Effects of Nudges: A Case Study of Energy Use Social Comparisons. *American Economic Journal. Applied Economics*, 11(1), 236–276.
February 25	Carbon Offsets - Aldy, J. E., & Halem, Z. M. (2024). The evolving role of greenhouse gas emission offsets in combating climate change. *Review of Environmental Economics and Policy*, *18*(2), 212–233. - Pande, R. (2024). Offsets, carbon markets, and climate and economic justice. *Science*, *385*(6714), eads1902. - West, T. A. P., Wunder, S., Sills, E. O., Börner, J., Rifai, S. W., Neidermeier, A. N., Frey, G. P., & Kontoleon, A. (2023). Action needed to make carbon offsets from forest conservation work for climate change mitigation. *Science*, *381*(6660), 873–877. - Badgley, G., Freeman, J., Hamman, J. J., Haya, B., Trugman, A. T., Anderegg, W. R. L., & Cullenward, D. (2022). Systematic over-crediting in California's forest carbon offsets program. *Global Change Biology*, *28*(4), 1433–1445.
March 2	*In-class Midterm Exam*
March 4	*Midterm Debrief + Final Project Introduction*
March 16	Climate Adaptation Overview - Carleton, T., Duflo, E., Kelsey Jack, B., & Zappal`a, G. (2025). Adaptation to Climate Change. - Barreca, A., Clay, K., Deschenes, O., Greenstone, M., & Shapiro, J. S. (2016). Adapting to Climate Change: The Remarkable Decline in the US Temperature-Mortality Relationship over the Twentieth Century. *Journal of Political Economy*, 124(1), 105–159. - Deschênes, Olivier, and Michael Greenstone. 2011. "Climate Change, Mortality, and Adaptation: Evidence from Annual Fluctuations in Weather in the US." *American Economic Journal: Applied Economics*, 3(4): 152–85. - Deschenes, O. (2014). Temperature, human health, and adaptation: A review of the empirical literature. *Energy Economics*, 46, 606–619.
March 18	Information - Burlig, F., Jina, A., Kelley, E. M., Lane, G., & Sahai, H. (2025). The value of forecasts: Experimental evidence from India. *NBER Working Paper*.

	- Anand, V. (2025). Does getting forecasts earlier matter? Evidence from winter advisories and vehicle crashes. *American Economic Journal. Economic Policy*, *17*(4), 106–134. - Song, Y. (2024). The value of weather forecasts: Evidence from labor responses to accurate versus inaccurate temperature forecasts in China. *Journal of Environmental Economics and Management*, *125*(102970), 102970. - Hino, M., & Burke, M. (2021). The effect of information about climate risk on property values. *Proceedings of the National Academy of Sciences*, *118*(17). - Lee, S. (2023). Adapting to Natural Disasters through Better Information: Evidence from the Home Seller Disclosure Requirement. *SSRN Electronic Journal*. - Ortega, F., & Taṣpınar, S. (2018). Rising sea levels and sinking property values: Hurricane Sandy and New York's housing market. *Journal of Urban Economics*, *106*, 81–100. - Bakkensen, L., Phan, T., & Wong, T. N. (2025). Leveraging the disagreement on climate change: Theory and evidence. *Journal of Political Economy*, *133*(10), 3132-3166.
March 23	Real Estate - Hino, M., & Burke, M. (2021). The effect of information about climate risk on property values. *Proceedings of the National Academy of Sciences*, *118*(17). - Gourevitch, J. D., Kousky, C., Liao, Y. (penny), Nolte, C., Pollack, A. B., Porter, J. R., & Weill, J. A. (2023). Unpriced climate risk and the potential consequences of overvaluation in US housing markets. *Nature Climate Change*, 1–8. - Murfin, J., & Spiegel, M. (2020). Is the Risk of Sea Level Rise Capitalized in Residential Real Estate? *The Review of Financial Studies*, *33*(3), 1217–1255. - Ostriker, A., & Russo, A. (2024). The Effects of Floodplain Regulation on Housing. *Working Paper*. - Bakkensen, L., Phan, T., & Wong, T.-N. (2025). Leveraging the disagreement on climate change: Theory and evidence. *The Journal of Political Economy.*
March 25	Infrastructure and Public Spending - Fan, Y. (2024). Levees and levies: Local financing of climate infrastructure maintenance and housing market dynamics. *Working Paper*. - Kelly, D. L., & Molina, R. (2023). Adaptation Infrastructure and Its Effects on Property Values in the Face of Climate Risk. *Journal of the Association of*

	Environmental and Resource Economists, *10*(6), 1405–1438. - Bradt, J. T., & Aldy, J. E. (2022). Private benefits from public investment in climate adaptation and resilience. - Hsiao, A. (2023). Sea level rise and urban adaptation in Jakarta. - Henkel, M., Kwon, E., & Magontier, P. (2022). The unintended consequences of post-disaster policies for spatial sorting. *SSRN Electronic Journal*.
March 30	Insurance and Reinsurance - Boomhower, J., Fowlie, M., Gellman, J., & Plantinga, A. (2024). How Are Insurance Markets Adapting to Climate Change? Risk Classification and Pricing in the Market for Homeowners Insurance (No. w32625). *National Bureau of Economic Research*. - Oh, S., Sen, I., & Tenekedjieva, A. M. (2025). Pricing of climate risk insurance: Regulation and cross-subsidies. *Journal of Finance, Forthcoming*. - Keys, B. J. (2025). Housing, Climate Risk, and Insurance. *National Bureau of Economic Research*. - Solomon, A. (2024). Insuring correlated climate risk: Evidence from public reinsurance. In *Social Science Research Network.*
April 1	Climate Adaptation Finance - Collier, B., Hartley, D., Keys, B., & Ng, J. X. (2024). Credit when you need it (No. w32845). *National Bureau of Economic Research*. - Jerch, R., Kahn, M. E., & Lin, G. C. (2023). Local public finance dynamics and hurricane shocks. *Journal of Urban Economics*, 134, 103516. - Liao, Y. (penny), & Kousky, C. (2022). The Fiscal Impacts of Wildfires on California Municipalities. *Journal of the Association of Environmental and Resource Economists*, *9*(3), 455–493. - Watkiss, P., & England, K. (2025). Adaptation finance and the private sector: opportunities and challenges for developing countries. *Zurich Climate Resilience Alliance*. - Catastrophe bond https://www.artemis.bm/news/nciuas-recent-catastrophe-bond-included-integrated-disaster-resilience-feature/
April 6	Spatial Regulation: Correlated Air Pollutants and Resource Management

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