



MIT is applying economic research and insights to the problem of climate change and its accompanying ecological and social impacts.

Climate Change and Environmental Economics

Climate change is one of the most pressing challenges of our time. Economic research is becoming a powerful tool to understand and inform policy and incentives related to climate change and energy use—and to assess the impact of environmental degradation and climate change on health, well-being, and productivity worldwide.

At MIT, environmental economists are using cutting-edge techniques to weigh the impact of climate change globally, from rising sea levels and forest fires in Asia to deforestation in the Amazon and agricultural output around the world. A focus on environmental economics is especially critical in developing countries where pollutant concentrations and projected climate damages are particularly acute.

But designing effective emissions-reduction policies depends on building a strong base of evidence of the impact of environmental quality, and on developing new techniques to measure environmental benefits and harms. MIT researchers are drawing on rapidly proliferating data to shed new light on the profound, interconnected effects that pollutants and greenhouse gas emissions have on human health and mortality; labor productivity; income, education, and crime; migration and conflict.

Sustaining and building upon MIT's history as a pioneering economic research institution requires strengthening the Economics Department's financial base, especially in endowed research support. And early startup funds are critical for major new research projects to move forward.

SPOTLIGHT ON RESEARCH

Clare Balboni is the 3M Career Development Assistant Professor of Environmental Economics at MIT and an affiliate of MIT's Center for Energy and Environmental Policy Research. Her innovative work on global warming has brought a broad perspective to the topic. This includes adapting empirical techniques from the field of international trade to provide insight into the potential effects of sea level rise on infrastructure investments in Vietnam, and exploring with colleague **Benjamin Olken** the political economy of forest fires in Indonesia, where deforestation is a significant contributor to global warming.

Benjamin Olken, the Jane Berkowitz Carlton and Dennis William Carlton Professor of Microeconomics and director of the Abdul Latif Jameel Poverty Action Lab has worked extensively in Indonesia. His research in development economics includes work on Amazon deforestation and the impact of climate shocks on developing economies.

Professors of economics **Arnaud Costinot** and **Dave Donaldson** have examined the effect of climate change on agricultural output around the world. **Paul Joskow**, the Elizabeth and James Killian Professor of Economics, Emeritus, remains active and has a vast body of work on electricity generation that includes work on conservation, nuclear, and renewable energy as well as studies of environmental regulations. He organized MIT's 2019-2020 series of climate symposia.

Recognizing that the world's changing climate disproportionately affects people living in poverty, the department's Abdul Latif Jameel Poverty Action Lab (J-PAL) launched the King Climate Action Initiative (K-CAI) in 2020, with the mission to generate evidence and catalyze the scale-up of high impact policy solutions at the nexus of climate change and poverty.

HOW YOU CAN ADVANCE OUR WORK

Your support of our efforts—the fundamental research we conduct and the evidence-based solutions we help practitioners develop—will have meaningful, global impact. To discuss how you can help advance our work, please contact Assistant Dean for Development, Anne Marie Michel, ammichel@mit.edu, 617-253-4075.



“Economic models and methods can help to enhance our understanding of how to balance the imperative for continued growth in prosperity and well-being—particularly for the world’s poorest—with the need to mitigate and adapt to the environmental externalities that this growth creates.”

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