



IS BEHAVIOR THE SOLUTION?

Developing a Research Agenda for Climate Change Mitigation

June 9, 2023

The Rockefeller Foundation

On June 9, 2023, the Social Science Research Council, The Conversation, and Sage, hosted a [convening at The Rockefeller Foundation](#) to discuss the potential for cost-effective and scalable behavioral interventions to reduce harmful emissions.

The convening, which was attended by policymakers, leaders of philanthropic and nonprofit organizations, journalists, and social and behavioral scientists, featured several examples of how large-scale behavioral science, conducted in partnership with governments and firms, can generate reliable evidence of behavioral interventions that reduce emissions. By “de-risking” additional investments in those interventions, these research partnerships can drive pro-climate policy change.

By “de-risking” investments in pro-climate behavioral interventions, research partnerships can drive pro-climate policy change.

OUR PARTNERS





WHAT BEHAVIORAL INTERVENTIONS SUCCESSFULLY REDUCE EMISSIONS?

Emissions markets incentivize firm managers to act on private information about the costs of emissions reductions, resulting in larger and more cost-effective reductions in harmful emissions.

- In India, Michael Greenstone (University of Chicago) and colleagues partnered with the government of Gujarat to [create and evaluate a market to reduce particle emissions](#). The market leverages the private information known by plant managers about the costs of reducing particle emissions. The research team demonstrated that facilities randomized into the market had both larger (20% - 30%) and more cost-effective (12%) emissions reductions than facilities randomized out of the market.
- **Based on this evidence, the state of Gujarat is expanding the particle emissions market and is creating new markets in CO₂ emissions and water pollution.**



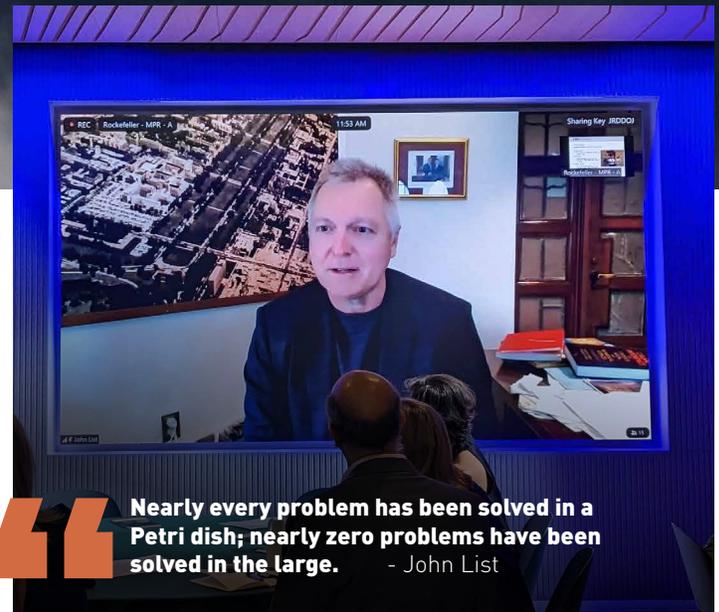
Encouraging consumer use of automation on smart appliances can result in large reductions in energy consumption.

- Casey Wichman (Georgia Tech), Karen Palmer (Resources for the Future), and colleagues partnered with Ecobee, a smart thermostat company, to develop and test an intervention encouraging consumers to enable automated settings responsive to electricity prices. [The intervention resulted in substantial reductions in both energy use and consumer energy costs, at very low marginal cost.](#)
- **Based in part on this evidence, Ecobee has scaled expansion of automation across its North American service areas, and is experimenting with additional automation features.**



Behavioral “nudges” targeted at decision-makers with climate impact can result in large emissions reductions.

- John List (University of Chicago) and colleagues [partnered with Virgin Atlantic Airways](#) to develop and evaluate an intervention aimed at motivating pilots to reduce their fuel consumption through informational and pro-social messages. The very low-cost intervention resulted in large decreases in fuel consumption and CO₂ emissions.
- Based on this evidence, Virgin Atlantic continued the intervention after the study ended. The research team is now partnering with firms in the shipping industry to develop and evaluate similar interventions.



“ Nearly every problem has been solved in a Petri dish; nearly zero problems have been solved in the large. - John List

Behavioral interventions along the supply chains of large global firms may be able to generate very large reductions in emissions.

- A new research partnership announced at the convening by John List (University of Chicago) will **develop and evaluate multiple behavioral interventions along Walmart’s global supply chain. The goal of the project is to find behavioral interventions that [reduce emissions by one gigaton by 2030.](#)**



Tying contractor pay to the quality of work on energy efficiency projects can result in large energy efficiency gains.

- In Illinois, [Erica Myers \(University of Calgary\)](#) and [colleagues](#) [partnered with the Illinois Weatherization Assistance Program](#) to develop and test an intervention tying contractor pay to the quality of work on weatherization projects, substantially reducing energy use and energy costs for low-income households.
- Based on this evidence, the Illinois Weatherization Assistance Program is considering expanding deployment of the intervention.





HOW CAN PHILANTHROPIC ORGANIZATIONS AND GOVERNMENTS USE RESEARCH PARTNERSHIPS TO DRIVE PRO-CLIMATE POLICY CHANGE?

Funders can support research partnerships to evaluate the impacts of additional pro-climate behavioral interventions, potentially leading to new opportunities to reduce emissions cost-effectively at scale.

- We know little about the potential impacts of behavioral interventions on outcomes that include adoption of emissions-reducing technologies like heat pumps, production and consumption of climate-healthy food, expansion of green transportation options, and reductions in water use.
- **Based on the success of pro-climate behavioral interventions in many contexts, it is urgent that we learn about the potential for other cost-effective and scalable behavioral interventions to reduce emissions.**

Funders can support the effective communication of rigorous evidence about successful pro-climate behavioral interventions to public, private, and nonprofit decision-makers, ensuring the scaling of successful interventions beyond original contexts.

- Philanthropic organizations and governments can leverage their extensive global networks to ensure that evidence of effective behavioral interventions is broadly disseminated, enabling the widespread adoption of those interventions.

Funders can support the coordinated evaluation of pro-climate behavioral interventions across multiple communities, ensuring the production of both local knowledge sensitive to context and general knowledge scalable to diverse settings.

- Some pro-climate behavioral interventions may be context-specific, while others may be generalizable across diverse contexts. Coordinated evaluations of behavioral interventions across multiple settings will allow us to identify successful interventions in both categories.





Funders can multiply the impacts of their climate investments by facilitating research partnerships to rigorously evaluate those investments.

- Many investments in pro-climate initiatives are not subjected to rigorous evaluation, undermining our ability to learn about and scale highly cost-effective programs and policies. Partnering researchers with governmental decision-makers, firms, and NGOs with climate impact can ensure that successful programs and policies have widespread take-up beyond initial investments.

CONCLUSION

Consensus emerged during the convening that there exist many high-impact opportunities for philanthropic organizations and governments to leverage research partnerships to drive pro-climate policy change. Identifying cost-effective and scalable pro-climate behavioral interventions can "de-risk" investments in those interventions, leading to climate change mitigation at scale.

