

A Look at What's Happening

Inside RFF

RFF University Fellow and Princeton University Professor **Simon Levin** was awarded the 2014 Tyler Prize for Environmental Achievement for his research revealing multifaceted relationships between species and ecosystems and his foundational role in shaping environmental policy and advancing the study of complex ecosystems.

Molly Macauley, RFF vice president for research and senior fellow, participated in the National Research Council's Space Studies Board for the Standing Committee on Earth Science and Applications from Space at the National Academies. Macauley also served as a Distinguished International Visitor at the invitation of the government of Quebec and met with industry representatives, scholars, and government officials.

James Boyd, RFF senior fellow and director of the RFF Center for the Management of Ecological Wealth, served as a panel member on the Mississippi River Diversions Planning public hearing for the Louisiana Coastal Planning and Restoration Authority in New Orleans.

The Association of Environmental and Resource Economists has just released its new official research journal, *Journal of the Association of Environmental and Resource Economists*, published by the University of Chicago Press. Several RFF researchers, fellowship recipients, and collaborators serve on the editorial board, including Senior Fellow **Maureen Cropper**, University Fellow **John List** (University of Chicago), and University Fellow **Stephen Polasky** (University of Minnesota).



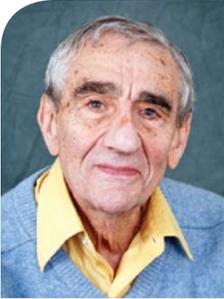
COMMON RESOURCES

Visit RFF's blog, *Common Resources*, where experts provide up-to-date commentary on the latest research, analysis, and debates surrounding environmental and natural resource policy issues—in Washington and around the world.

Join the discussion at
www.common-resources.org.



Joel Darmstadter Receives Adelman-Frankel Award



RFF Senior Fellow Joel Darmstadter has been named the 2014 recipient of the Adelman-Frankel Award by the United States Association for Energy Economics (USAEE).

According to the USAEE, the award is given to recognize

an individual or organization's "unique and innovative contribution to the field of energy economics." Darmstadter is the 18th awardee since its inception in 1999, joining a list of notable academics, public officials, and specialized groups. Upon receiving his award at the International Association for Energy Economics (IAEE) International Conference, Darmstadter delivered the following remarks:

“Various USAEE/IAEE publications have addressed the issue of climate change over the years—most recently, the special *Energy Journal* collection of Energy Modeling Forum 24 (EMF 24) papers on ‘US Technology and Climate Policy Strategies.’ Its online posting is especially timely, as we approach next year’s multi-country negotiations in Paris to create, as dictated by the United Nations Framework Convention on Climate Change, a successor to the flawed and ill-fated Kyoto Protocol. While the EMF 24 work concentrates largely on potential US initiatives, the virtually concurrent, globally oriented Fifth Assessment Report of the Intergovernmental Panel on Climate Change—and particularly the energy-sector mitigation scenarios of its Working Group III—have closely explored a time path designed not to breach something like a 2° Celsius rise in global temperature in this century.

It’s sufficiently challenging to figure out the fuel-switching, conservation, carbon-capture, and other approaches needed to achieve this target. And skillful application of energy economics and the insights of energy economists are clearly an important part of confronting the challenge ahead. But it also means—keeping in mind the imperative of global participation—that issues of governance, equity, enforcement, and much else have to be part of designing and implementing an effective new regime. In that context, it’s worth recalling that four years before his admired 2013 book, *Climate Casino*, made the argument more pointedly, Bill Nordhaus noted in his 2009 *Energy Journal* article (‘The Impact of Treaty Nonparticipation on the Costs of Slowing Global Warming,’ volume 30, special issue 2) that ‘for a global public good like reducing CO₂ emissions, achieving a high level of participation is a critical feature of an efficient policy.’

That said, count on the need for negotiators in Paris to consider a mechanism enabling a country’s international responsibility, as signaled by Nordhaus, to match its affordability, as perceived or claimed in the light of economic reality. With a need for stepped-up momentum in dealing with global warming clearly of the essence, I’d be amazed if these considerations did not significantly engage the professional activities of many at this conference. Prolonged hesitancy in tackling this challenge is a luxury we can’t indulge.”

Highlights from Recent Journal Articles by RFF Researchers

Regulating Greenhouse Gases from Coal Power Plants under the Clean Air Act

Joshua Linn, Erin Mastrangelo, and Dallas Burtraw

Journal of the Association of Environmental and Resource Economists | Spring/Summer 2014 | Vol. 1 | No. 1 | 97–134

In this paper, the authors use a model of power plant operation and efficiency investments to compare the cost-effectiveness of alternative policies to reduce greenhouse gas emissions from coal plants. The results indicate that a 10 percent increase in coal prices causes a 0.1–0.4 percent improvement in efficiency. Coal prices also have a significant effect on utilization. Using the estimates to compare alternative policies reveals that performance standards are less efficient than a tax because they cause greater utilization.

Floodplain Conservation as a Flood Mitigation Strategy: Examining Costs and Benefits

Carolyn Kousky and Margaret Walls
Ecological Economics | August 2014 | Vol. 104 | 119–128

As interest in floodplain conservation as a flood damage reduction strategy grows, the authors of this paper evaluate one such investment in the form of a greenway along the Meramec River in St. Louis County, Missouri. They estimate the opportunity costs, avoided flood damages, and capitalization of proximity to protected lands into nearby home prices. The proximity benefits alone exceed the opportunity costs; the avoided flood damages further strengthen the economic case.

Managing Shoreline Retreat: A US Perspective

Carolyn Kousky
Climatic Change | May 2014 | Vol. 124 | No. 1–2 | 9–20

Kousky considers how society can proactively manage shoreline retreat in those locations where it is required or deemed preferable. A three-part strategy is proposed: (1) reduce new development in the highest-risk areas; (2) adopt policies that allow for expected and orderly removal or modification of development as inundation occurs; and (3) take advantage of disasters to implement managed retreat approaches. Specific policies are recommended, and the challenges of institutional change are discussed.

Does a Detailed Model of the Electricity Grid Matter? Estimating the Impacts of the Regional Greenhouse Gas Initiative

Daniel Shawhan et al.
Resource and Energy Economics | January 2014 | Vol. 36 | No. 1 | 191–207

Because of the complexity of power grid operation, computing limitations until now have made it impossible to solve a policy analysis that combines realistic modeling of flows with a detailed transmission system model and the prediction of generator investment. To evaluate the amount of detail necessary, the authors simulate the effects of imposing a price on carbon on power plants in nine northeastern US states. They consider three grid models of varying complexity. Most of the impact predictions produced by the two simpler models differ from those of the most complex by more than 20 percent, and some by much more.