



Lea-Rachel Kosnik's knowledge combines environment and economics

By: Cate Marquis

Posted: 9/8/09

Lea-Rachel Kosnik, assistant professor of economics, works in a field bearing the name 'environmental economics.'

"Environmental economics, some would say, is an oxymoron," Kosnik said. Actually, she explained, it is the study of natural resources in the environment and how to balance maintaining those natural resources with productive use.

"It is trying to balance both preservation and use, and how to optimally do that," Kosnik said. "It is all about sustainability."

"Some of the research I am doing is looking at renewal energy sources and any potential the United States has to develop those," Kosnik said. Basically, producing enough energy from domestic sources to meet current consumption while doing more for the environment, she noted.

Kosnik has been teaching here since 2004. "I got my bachelors degree from University of Michigan-Ann Arbor and then I did a Fulbright for a year in Turkey," she said. "(I) got my masters and PhD at UCLA and I did a post doc at Montana State."

In Turkey, she studied the environmental impact of building several hydroelectric dams.

"Turkey actually has 98% of the headwaters of the Euphrates River within their geographic borders and almost 50% of the headwaters of the Tigris. They are oil poor, one of the only nations (in the region) without oil, but they are very water rich," Kosnik said.

Her research interests include environmental economics, public and regulatory economics, and behavioral economics.

She has taught courses in environmental economics, microeconomics, macroeconomics, cost-benefit analysis, public choice and industrial organization.

She has a love of teaching, inspired by her economics mentor. "The professor I took a class with was very engaging and very approachable," Kosnik said. She is teaching Microeconomics for Policy Analysis this semester and Environmental Economics next semester.

Kosnik is one of the speakers at the "Global Climate Change" course being taught through the Continuing Education department at the St. Louis Zoo. She will speak on October 29 about "Global economic changes: natural resources use and sustainable development in face of climate changes."

Kosnik will explain concepts like cap-and-trade but she also expects to talk a little about her research on renewable energy.

She was also one of the presenters at the Missouri Energy Summit, sponsored by the University of Missouri System and held in Columbia, Mo., earlier this year. She spoke of small hydro power.

"Most people, when they think of hydro power, think of dams like Hoover or Cooley or some big dam, but there is a category of hydro power called small hydro power," Kosnik said. Small hydro projects can be very small, 30 megawatts or less, but enough to satisfy the needs of a small village, she said.

"The key is that they don't include a dam," Kosnik said. Instead, they are usually on a river. It uses a weir, which diverts water, instead of a dam. "The water flows through it, there is no reservoir behind it, so it is extremely benign on the environment," she said.

"Small hydro power is a very environmentally-friendly form of energy generation. There are no carbon emissions," she said. "It is also an entirely domestic resource. You don't have to worry about imports or national security concerns or fuel price fluctuations, so it is a resource with a lot of extra benefits."

Kosnik found abundant potential for small hydro in Missouri. "There are hundreds of these sites," she said.

"There are incentives to be involved in these industries besides what is good for the environment," she said. "Jobs and profit."