Podcast interview: Maureen Cropper

Maureen Cropper is a professor of economics at the University of Maryland who specializes in environmental and natural resource economics, and the economics of health and safety regulations. She recently spoke with PNAS about her research and her 2008 election into the National Academy of Sciences.

Hi, welcome to Science Sessions. I'm Sola Biu. Today we will meet with Maureen Cropper, an environmental economist and economics professor at the University of Maryland. We will discuss her research and recent election into the National Academy of Sciences.

**Question**: Thanks for joining us! Are there subjects in environmental economics that you think are particularly important for the public to understand?

**Cropper**: I think it's important for people to understand the pollution they are creating when they drive a car, or turn on a light switch, or turn on their air conditioner. It's important for them to understand that they are creating pollution and environmental damages and what they are, and that they are creating damages locally—in terms of health effects or mining damages—and also globally in terms of greenhouse gas damages. It's important for people to understand this because ultimately if we are going to have regulations to control environmental damages it's important for people to support them so they have to understand why they are needed. And also, ultimately people are going to have to pay for them in terms of a higher cost of electricity or more expensive cars, and so they really do need to understand the nature of the pollution they are creating and why at least some of it needs to be reduced.

**Question**: Would you give us some background on what you do as an environmental economist?

**Cropper**: Okay, well a lot of what I do is actually trying to quantity the benefits of reducing pollution, especially air pollution. So we're talking about basically the impacts of sulfur dioxide, particulate matter, nitrogen oxide on heart disease, respiratory illnesses—such as chronic bronchitis and asthma—and the issue is both what are the physical benefits from reducing air pollution, in terms of reduced cases of chronic bronchitis or asthma, or people living longer, and then how do you put a dollar value on this? And you need to put a dollar value on this if you are going to compare the benefits of reductions in pollutions and regulations to the cost.

**Question**: Could you give us a brief overview on the National Academy of Sciences study you recently co-chaired on the “Hidden Costs of Energy”?

**Cropper**: Yes, what we did in that study was to look at the damages associated with electricity generation and we focused on primarily natural gas and coal-fired power plants and the damages associated with vehicular transportation, with basically transportation via passenger vehicle and truck. That was the essence of that study in terms of what we did.

**Question**: What can you tell us about any new research you are working on?

**Cropper**: Well, one study which I am doing that is actually in the Washington metropolitan area has to do with the cost of reducing people's vehicular emissions by having them not drive on high pollution days. Ground-level ozone is one of the common air pollutants in the United States, for which many metropolitan areas are out of attainment with Federal standards, including the Washington area. So the question is wouldn't it just be cheaper if we knew that tomorrow or the
next few days would be high temperature days and we thought, gosh, this might be a problem. These are usually referred to as code red days in the Washington area. Wouldn't it just be better to just get cars off the road on those days? So there have been voluntary programs when it's announced that tomorrow is a code red day and you are urged to take public transportation and not to drive but there have been studies of the effectiveness of just urging people to do this and the effects are pretty tiny. So we wanted to see if people were actually required to have a permit on these days how costly would a program like that be?

**Question:** What was your reaction when you found out you had been elected into the National Academy of Sciences?

**Cropper:** I was just absolutely thrilled, and I still am, at having been elected. But as many people have said before me, there is no greater recognition than the recognition of ones’ peers and I was just thrilled and I am still am.

*Dr. Cropper is a professor of economics at the University of Maryland, a former lead economist at the World Bank, and a senior fellow at Resources for the Future.*