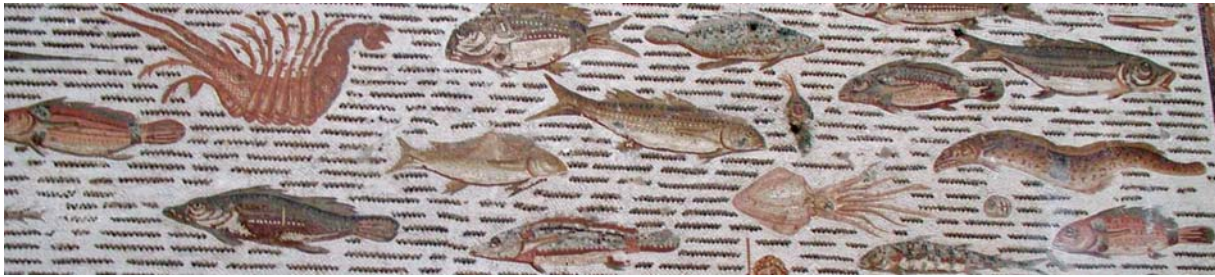


Energy and Resources Group Fall 2009 Colloquium Series (ER295)

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Ecosystem Services: From Eye Opening Metaphor to Blinders to Complexity

110 Barrows Hall / 4:00 p.m.

In an effort to communicate the delusion of economic growth and the essence of environmental sustainability, ecological economists advanced the metaphor of nature as a limited stock of capital that can sustain a limited flow of ecosystem services. There was a strong sense that, however revolting for those who intrinsically value nature, the use of market language and metaphors was necessary to awaken a public embedded in a global economy and distant from nature. The metaphor, however, soon rose to become a central frame-work for scientifically assessing ecosystem change in the Millennium Ecosystem Assessment. The transition was complemented by the search for innovative policies to manage environmental degradation in developing countries. Thus what had started as a critique of economic growth transformed into a new dominant discourse on payments for ecosystem services at the World Bank and other development institutions. Thus, over a period of about 15 years, an eye-opening metaphor intended to awaken society to think more deeply about the importance of nature transformed into a dominant model for environmental policy and management.

There are three critical problems. First, the theoretical literature on and projects for ecosystem services have been framed within a partial equilibrium framework that assumes "other things are equal". Yet the driving motivation of the initial use of the metaphor was to instigate significant economic change in response to what are perceived to be very serious environmental problems generated by the economy we have. Second, the stock-flow framework only utilizes one of the ways we understand ecological and economic systems, leaving out many of the other ways we understand them. By focusing on the stock-flow link-age and markets, the valuation of ecosystem services and implementation of PES projects will have additional unintended consequences that could have been better foreseen and adapted to by using additional patterns of thinking. Third, to assure sustainability, to adjust our economy to our changing understanding of climate - ecosystem dynamics, and to work with the richness of the science we have, we need very significant improvements in and more resources devoted to environmental governance. The flurry of enthusiasm for optimizing the economy by including ecosystem services has blinded us to the more important question of how we are going to make the institutional changes to substantially reduce human pressure on ecosystems.