

## WAS\*IS Statement of Interest for DAVID LETSON

I am an economist who does science policy research on weather and climate. The WAS\*IS community can greatly inform the work I do as a researcher and administrator at the University of Miami. Most people I have worked with over the last decade or so have been natural scientists needing to document the societal value of their contributions. While that may seem (and is) a peculiar existence, it does make for steady and arguably important work. We need to do research on research, as Roger Pielke Jr. has noted, to make sure we get our priorities right. A good explanation of this sort of contribution comes from George Philander:

Suppose we are in a raft, drifting toward a waterfall. To avoid a calamity, we must address two questions: How far is the waterfall? When should we get out of the water? We deal with these questions in radically different ways. The first can be answered with the methods of science. The second is a matter of policy. Controversies are common when it is unclear whether disagreements about the distance to the waterfall reflect scientific or political differences. The development of models that estimate the distance to the waterfall with greater accuracy will contribute considerably to a more constructive debate on how and when we should get out of the water. (G. Philander, *Science* **294**: 2101-2. 12/7/2001)

I can't tell you how far the waterfall is but could tell you what it might be worth to know.

Policy officials encounter few waterfalls but do face tough questions, such as: What's the best way to protect ourselves from hurricanes? After the 2004-5 seasons, more people are asking that question. Unfortunately, the answer we get may depend on whom is asked, and whether that person is a mitigation expert or a forecasting expert. We can reduce our exposure to hurricane risk by forecasting the paths of individual storms and attempting to elude them (evacuation) or by investing in stronger infrastructure and land use management (mitigation). Ideally, our officials would coordinate their mitigation and evacuation strategies. We are unlikely to find a best way to protect ourselves from hurricanes unless we consider the full range of alternatives.

Mitigation and evacuation jointly determine our hurricane risks and the costs to reduce them. Failure to coordinate these two different ways in which we manage hurricane risk can be both ineffective and needlessly costly. For example, because private citizens have the right to evacuate on their own accord, policy officials should consider evacuation responses when making mitigation policy. Time and again, economists such as Nobel laureate Gary Becker have shown that neglecting the linkages between various forms of protection leads to undervaluation of risk reduction and the misidentification of those who value risk reduction most.

I do not wish to overplay the importance of the mitigation-evacuation interaction. It is merely an example of the short-sighted and narrow conceptions of the human relationship to the natural environment that have prevented nations like the U.S. from reducing losses from natural hazards. As an economist who does science policy, I am working to change those views. The research tools and relationships offered by the WAS\*IS community would help me a great deal.