MEMBER PROFILE

DON SCAVIA

Professor Emeritus, University of Michigan



Describe your work.

I've had a pretty diverse career. At NOAA/GLERL (1975–1990), I developed ecological models of Lake Ontario and carried out lab and field studies on Lake Michigan plankton and nutrient dynamics. At NOAA headquarters (1990–2004), I ran competitive coastal ocean and Great Lakes grant programs, and led several interagency environmental science and policy assessments. On the University of Michigan faculty (2004–2018), I directed Michigan Sea Grant, the NOAA Cooperative Institute, and the Graham Sustainability Institute, and I worked with students and postdocs to develop and apply models of the Gulf of Mexico, Chesapeake Bay, and Lake Erie plus its watersheds.

Describe how you engage with policy making.

While at NOAA headquarters, I had the opportunity to testify in front of various congressional committees, help draft legislation, and lead integrated assessments that assembled and evaluated scientific information to guide environmental policy related primarily to hypoxia and harmful algal blooms. As an academic, I continued all three of these engagements, but I also worked with environmental NGOs to help develop and support their policy initiatives and advocacy.

What advice do you have for other researchers to engage at the science-policy nexus?

To be effective, you need to be a trusted source of information related to your area of expertise, and there is no short cut to that. Research, publish, and establish your credentials. While it is important to understand uncertainty and alternative explanations, when communicating with policy makers and the public, avoid being the "two-handed scientist." Saying "on the one hand, X; but on the other hand, Y" is not helpful. Similarly, knowing that a certain property could change by a factor of 2.4 or 2.6 is likely a nuance when all that is needed for policy making is that it will increase. In other words, understand the context of the policy decision, the precision and certainty realm in which they work, and the nature of the information they already have. You are providing a piece of their more complicated puzzle.

What has been the biggest success story (yours or others) of large lakes research informing policy for good?

Within my area of study, I think the research and modeling support for the original and revised phosphorus loading targets under the Great Lakes Water Quality Agreement are big success stories with some important commonalities and differences. Both agreements were based on the integration of multiple models and expert opinion, and the policy benefited from the consensus across the diversity of models. A key difference between the two eras is that for the original agreement models and associated research were deeply supported, which led to new models and insights that benefited not only the agreement and the Great Lakes, but the field in general. In contrast, the revised agreement had to rely on existing models and the efforts of volunteer modeling teams. While useful for the agreement, it was a lost opportunity for the field.

What are some of the biggest research needs to inform policy?

This may seem a bit strange coming from a natural scientist/engineer, but I think one of the most important research needs for informing policy comes from the social sciences. Increasing the understanding of how new information is used in policy development, identifying the impediments to its use, and exploring methods to overcome those impediments are critical. Equally important is that social scientists need to communicate their findings to natural scientists and engineers, rather than just among themselves in their journals.