CMMAP Scientists and the Science-Policy Interface

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Introduction to the Study

The large body of literature on the relationship between science and policy pays scant attention to how scientists conceptualize this relationship, how scientists engage with policy, and the factors that influence whether scientists choose to engage with policy. To address this gap we focused on a group of scientists associated with the Center for Multi-scale Modeling of Atmospheric Processes (CMMAP). We also hope to use the results of this study to enhance CMMAP's engagement with policy makers.

Research Questions

- How do CMMAP scientists conceptualize the interface between science and policy?
- Do CMMAP scientists engage with policy and if so, how?

Methodology

Survey

- Electronic survey using Survey Gizmo
- Five sets of questions:
  1. Activities performed by scientists over the past year, including policy-related activities
  2. Appropriate roles for scientists in policy process
  3. Potential barriers to policy engagement
  4. How scientists effectively influence policy
  5. Demographic data
- Sent to the CMMAP team list and the CMMAP graduate student list
- Data was collected anonymously and aggregated for analysis
- Respondents = 49

Interviews

- Semi-structured interviews with:
  - CMMAP Faculty (4)
  - CMMAP Researchers (4)
  - CMMAP Graduate students (4)
- Interviews were recorded, transcribed and coded for analysis

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Key Findings

CMMAP scientists believe that science can and should play a significant role in policy making and that the relationship between science and policy is best mediated through groups of scientists working together.

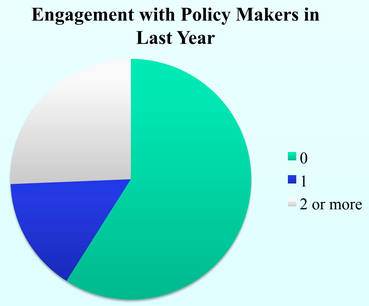
- *Groups are seen to reduce some of the risks associated with engaging with the policy process. This was particularly important for more senior scientists. This assumption is generally supported in the literature on the science-policy interface (Pielke 2007).*
- *CMMAP scientists didn't tend to differentiate between "advocacy" organizations and more "scientific" organizations. Some research suggests links to advocacy organizations may jeopardize the credibility of science/scientists in the policy process (Guston 2000; Pielke 2007).*

CMMAP scientists vary in terms of what types of activities are most effective in influencing policy.

ACTIVITY	% rated as "very effective" or "effective"
Participating in an officially-sanctioned review process (e.g. IPCC)	66%
Testifying to Congress	65%
Meeting with policy makers	64%
Publishing in academic journals	37%

- *Research on the science-policy interface suggests review processes can effectively influence policy when the reviews are seen as **credible, salient** and **legitimate** by policy makers (Clark et al. 2006).*
- *Meeting with policy makers can be useful in developing trust and enhancing the salience of scientific research, but communication must be two-way (Jasanoff 2004; Jasanoff and Wynne 1998).*
- *Research suggests that publishing in academic journals is not an effective way of influencing policy (Van Orsdel 2007).*

CMMAP scientists spend little time interacting with policy makers.



- *Most interactions are in a professional capacity.*
- *No systematic bias against engagement with policy.*
- *Interacting with policy makers is seen as additional to regular responsibilities of being a scientist.*
- *No correlation between attitudes towards the appropriateness/effectiveness of scientists engaging in policy and actual behavior.*

Conclusions

Research on the science-policy interface suggests that scientists can play an important role in strengthening the role of science in policy, but that this requires scientists to engage with policy makers in ways that enhance the salience, credibility and legitimacy of scientific knowledge. Our research suggests that CMMAP scientists recognize the importance of linking science and policy and see engaging with the policy process as an appropriate activity for scientists. Yet, most CMMAP scientists do not engage with policy makers. Two obstacles appear to be a professional norm that engaging with policy makers falls outside the normal responsibilities of a scientist and lack of knowledge about how best to interact with policy makers. Future efforts to strengthen the science-policy relationship must address these issues.

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