ASSESSING THE ROLE OF SCIENTIFIC INFORMATION IN SAC RECOMMENDATIONS & NMS MANAGEMENT DECISIONS

Society often expects science to inform management and policy decisions, whether through direct consultation with its experts or from summaries targeting broader audiences. Policy research suggests that social networks among stakeholders and managers have a large influence on the flow and use of scientific information. The Office of National Marine Sanctuaries (ONMS) and its sanctuary advisory councils (SACs) constitute a group of stakeholders, including scientists and non-scientists, working together to manage our nation's underwater protected areas. Among agency and stakeholder counterparts, there is an important dynamic involving science and management decisions: how do councils integrate scientific information into their recommendations to managers? And respectively, how do managers address those recommendations in light of their own scientific expertise and understanding? With 14 sites acting independently under a common ONMS framework, and occasionally with one another on key issues, this system is well-suited for investigating the role of scientific information in the decision-making process and the importance of network structures. Our research goals are:

1. to evaluate the flow (access and diffusion) of scientific information through councils, as well as its valuation and use where recommendations are made to sanctuary managers;
2. to assess how sanctuary managers are valuing and using council recommendations in conjunction with their own understanding of the relevant science;
3. to identify the conditions under which scientific information increases stakeholder collaboration and improves the effectiveness of sanctuary management.

RELEVANCE

Since SACs play a principal role in guiding NMS decisions, it is critical to understand where that guidance comes from and how it connects back to the science NMS research provides, considers and supports. Similarly, it is important to know how NMS managers value and use the recommendations made by their councils. This study will address both of these facets across multiple spatial scales (sites, regions and nation-wide), with direct value and insight to the ONMS.

More broadly, the study will contribute to a surprisingly sparse realm of academic understanding of how scientific information is employed in public decision-making. It will also offer perspective to scientists seeking to improve the communication of their research findings to appropriate audiences.

METHODS AND STUDY STAGES

- Stage 1: Observational Site Visits. Initially, I will be traveling to attend a number of council meetings (5-7 sites) to simply listen and learn about the processes. During these visits, I will introduce myself but otherwise plan to remain in the background and only be present for the day of the meeting. The observations I make during this time, along with my review of relevant documentation and communication with ONMS staff at headquarters, will help guide my on-going research development.
- Stage 2: Presentations and Personal Interviews. Next, I will visit (or in some cases, re-visit) all 14 sites for a council meeting and spend a few additional days locally. During the meetings, I would like to make a short presentation to formally introduce the study and spend some time answering your questions about it (30 minutes total). I would also like to set up some personal interviews (<30 minutes each) with a few council members, including the Chair, Research Seat, and perhaps 2-3 others as recommended by the Chair, SAC Coordinator and/or Superintendent. Similarly, I will want to introduce the study to key NMS staff and conduct interviews with them. In particular, I would like to speak with the Superintendent, Research Coordinator, SAC Coordinator and any other individuals who are identified as playing an important role in responding to scientifically-relevant council recommendations for each site (*e.g.*, science program directors). I also plan to connect with key regional managers and staff based at ONMS

Headquarters. The idea is for me to absorb a breadth of perspectives on the role of science in councils and management decisions, opinions on information access and any issues of concern with respect to the study. It will also help ensure that I am asking the right questions (in the subsequent survey) from your points-of-view and make the quantitative study as informative as possible.

- Stage 3: Online Survey of Council Members & NMS Staff. Finally, having taken into consideration all of your input and feedback, I will refine my questions for a quantitative survey, which will allow me to evaluate the role of science in ONMS management. A link to the online survey will be sent out (via email) to all council members and the selected NMS staff. It will be designed to take <30 minutes to complete and will be available for at least several weeks.

Results, at least in part, will be shared with the council and NMS communities during the SAC Summit in May 2011 (in Savannah, GA). At that stage, I would especially value insight and feedback from participants. The study's final results will be provided to ONMS as a report by the end of 2011 and they will also constitute a chapter of my dissertation, with the ultimate goal of several publications in peer-reviewed journals.

COUNCIL INVOLVEMENT

I anticipate the contribution of individual council members to total <2 hours time between now and the end of the 2010 year. This time distribution follows: 30 minutes for presentation attendance (at a SAC meeting), 30 minutes for interviews (selected individuals), 30 minutes for online survey completion (everyone), and any time you choose to spend communicating with me beyond that. Additionally, there will be some participation (1-2 hours) of individuals attending the 2011 SAC Summit, where I will be presenting results and inviting feedback.

NMS INVOLVEMENT

I anticipate the contribution of most individual NMS staff members involved with this research will be similar to above. However, some additional time may be requested for on-going dialogues, follow-up, acquiring materials on specific issues and the like. This will vary on a situational basis but should not disproportionately weigh on any individual or staff role.

TIMELINE

June - September 2010	Stage 1: visit selected councils for observation
September - December 2010	Stage 2: visit all councils & NMS staff to introduce study; conduct interviews
February - March 2011	Stage 3: online survey administration
May 2011	SAC Summit: share study's emerging results
December 2011	Final report to ONMS

RESEARCHER BIOS

Lauren E. Garske is a Ph.D. Candidate in Ecology at the University of California, Davis and a 2009 Dr. Nancy Foster Scholar (NOAA). She has a B.A. in Marine Biology from the University of California, Santa Cruz (2000). Her research experience includes investigating mercury contamination in the San Francisco Bay-Delta ecosystem, discovering deep water kelp forests in the Galapagos Islands, and predicting nearshore ecosystem exposure to river runoff in Central California. Lauren also has a strong interest in the interface between science and policy, which motivates this current research.

Mark Lubell is an Associate Professor in the Department of Environmental Science & Policy at the University of California, Davis. He has a Ph.D. in Political Science from State University of New York at Stony Brook (1993). His research on collective action and natural resource management has included studies on the National Estuary Program as well as stakeholder perspectives on the implementation of California's Marine Life Protection Act. Mark is the policy adviser on Lauren's dissertation committee.

QUESTIONS? PLEASE CONTACT LAUREN AT legarske@ucdavis.edu **OR (707) 537-5640.**