2010 EEN Forum Notes

Session Name: From Science to Service: Evaluating Quality and Impact of Science Translation for Decision-Makers

Session Date/Time: Monday, June 7, 2010, 2:45pm

Notetaker: Kim Damm

Main Themes:

- Decision-makers of all levels need science and data to inform their recommendations and decisions.
- Managing and evaluating collaborative processes to engage decision-makers in the research design and implementation to ensure end-user application.
- The importance of considering scale and sustainability in the design of science translation initiatives.
- The use of communication tools and strategies to reach regional and national policy makers.
- Key challenges in monitoring and evaluation going forward.

Detailed Notes:

- Facilitated by Kate Barba, NOAA, this session addressed how decision-makers of all levels need science and data to inform their recommendations and decisions. The science and data needs to be credible, relevant and accessible. Managing for environmental sustainability requires an adaptive approach and all too frequently, the feedback loops we use to assess needs and link science to users is not grounded in social science. Science-based agencies and organizations struggle with ever-increasing demands from a wide range of user groups for understandable and useful scientific data products and information. This translation process, or continuum, is widely under-resources, poorly understood and in the face of climate change, critical to decision-making in a world of scientific uncertainty at local levels. Panelists will discuss their experience in managing and evaluating collaborative processes to engage decision-makers in the research design and implementation to ensure end-user application, the importance of considering scale and sustainability in the design of science translation initiatives; the use of communication tools and strategies to reach regional and national policy makers; and discussion of some of the key challenges in monitoring and evaluation going forward.

- Kate Barba, NOAA, introduced that the other part of science-based organizations involves translating that science and utilizing it to help inform policy.

- Kalle Matso, University of New Hampshire, presented on The Cooperative Institute for Coastal and Estuarine Environmental Technology (from here onwards referred to as Adam) and The NERRS Science Collaborative (from here onwards referred to as Eve).
    - From working on these two projects, learned the following lessons:
        - Collaborative research between organizations is an important opportunity.
        - Research collaboration produces timely and effective knowledge.
    - Driving question is how research funding organizations such Adam and Eve can best use their influence to foster collaboration?
    - Three Steps:
        - Evaluating the program as a whole

        - Evaluating the impact of various projects
        - Evaluating our evaluation
    - Lessons from 2006 evaluation of Adam:
        - Utilized SMART Goals and total number of technologies used as two main tools for measurement. Questioned why some tools were being used and others not? How did funding pertain to this?
        - Logic models are useful and usable.
        - Qualitative interviews foster relationships and surface deep nuanced information. Difficulty in measuring and using this qualitative data.
        - NVIVO for analysis is fun, but based on a cost-benefit analysis, the software is probably more useful for academic research.
        - Performance metrics highlighted that the researched didn't collect everything intended and didn't utilize everything collected.
        - Challenges in fully implementing evaluation plan.
    - Lessons from Eve, which was formed in September 2009:
        - What Eve is doing differently:
            - Less time chasing perfect indicator. More time collecting data. Suggest just picking something. Follow through is key.
            - Agree on raison d'etre. Asking what is the one thing they want to see and what is the one thing that will make this study successful. Not trying to reduce everything to quantitative measures.
            - Each component is customized. Allow each staff to use the program differently.
        - Collaboration can lead to increased linking of science to decision making.
        - Review system is an appropriate approach.
        - Applicants are approaching collaborative processes with sufficient rigor.
        - Question if you will get any applicants who will approach the process with sufficient vigor. A badly run collaborative process can be worse than no collaborative process.
        - Link evaluative processes to decisions that need to be made.
        - Thus far, Eve is 1. more fun, 2. more connected to data and 3. more reasonable.
        - Continuing to question how effective this process is in producing good results.
        - Goal is to be able to recommend what directions NOAA should continue in.
- Holly Hartmann, University of Arizona presented on experience with place based projects:
    - Important to distinguish between process and products.

- Decision support tools have components of products and process.
- Early on asked NOAA how RISA will be evaluated. NOAA said they were hoping RISA could help out.
- Question of how to decide if a project is successful?
- From a research based stakeholder perspective, how do you evaluate with regards to decision support tools?
- With place based research, and as a National funder, what is your objective?
- Local place based projects are experiments. Ideally have these project duplicated all over. How to scale up place based research? Can't afford to recreate these projects all over the world.
- Decision support tools can be a way to scale up this work. How do you evaluate these tools? Can't just count hits.
- Do decision support tools evolve out of engagement? Can you show that your research was responsive to that? And relevant?
- Tools have to be customizable.
- Does your tool help people connect the dots? The past, present and future? Can you show that your research was responsive to that? And relevant?
- Do your decision support tools evolve out of engagement? The driving forces that instigate change?
- Does the tool lead to capacity building?
- Need to think about design of the tool.
- Do a storyboard and field testing of individual products
- Dynamic drought index tool was first developed at University of South Carolina and later transferred to the state of South Carolina. Other states became interested in the tool. What do you do to scale up? Difficulties with managing multiple copies of tools. Easier to have one program managed centrally. Avoid duplication of efforts.
- Another way of thinking about scalability is to design the tool with scalability in mind. Local versus national forecasts are a good example.
- Developing a tool not to be a one stop shop, but ones that let you create your own one stop shop. A specific design mindset.
- Open source development such as wikipedia is another option. Turns a decision support tool into a process. Difficult to use with government websites because of security.

- Chad English, Communication Partnership for Science and the Sea (COMPASS), presented on COMPASS:
  - Academic and scientific communities don't always have the tools to think about communication and get the word our about science.
  - Work with science community to help scientists become spokespeople themselves.

- See direct interpersonal communication between scientists and policymakers or journalists as more effective than direct publication of graphs, charts, etc.
- Few years back saw real need to evaluate work and see if they were being effective in ways they thought they were.
- Entirely foundation funded. Foundations want measurements and metrics. Don't produce products so needed to measure communication impact.
    - Tracked short-term impact in a meaning quantitative way. Meant to show that the organization is producing something. Looked at policy and media impacts.
    - Longer-term impact is more qualitative and is the piece still missing. Includes organizational goals. Qualitative, long-term goals are important to the organization's direction but harder to sell to funders.
    - Evaluated reach of stories as well. Looked at geographic reach and nature of publications.
- Why there are ways to measure long-term impacts, the challenges include –
    - Short timeline from funders. Required to file at every one to three years.
    - Mismatch between timeframe of grant and timeframe of impact.
    - Time required to do this tracking can be debilitating to get work done.
- Overall question is how do we tease apart our role form everyone else's and assign value or quantitative metric to that?

- Questions and Discussion:
    - Question for Kalle Matso: How did you identify the PIs to interview? Were they the key users? With the second program, are you using a new methodology? Response from Kalle Matso: We asked them to identify the primary user. Of the proposals, the majority listed intended users. Collaborative processes are being pushed to such a great degree. All the programs being funded will be collaborative. What it comes down to is out resources and how many people and projects we can fund.
    - Question for Chad English: In regard to the ways you measure short and long term outcomes, you have two audiences you are trying to influence: policymakers and scientists. Are you measuring the degree to which scientists are satisfied with methods? If you weren't involves, then what does science look like when it's communicated? How does your organization measure if it has made an impact in the process? Response from Chad English: With scientists we work with, we spend as much time as possible trying to extract feedback from them on what is and isn't working. Much more difficult is why not and is it a credibility issues on our side when an organization doesn't want to work with us. Try to bring out science in a neutral way. With people who don't want to work with us, is the issue that they don't understand what we're doing? See it as a win-win situation when scientists get involved in a meaningful way. In terms of when science working without our involvement, we mostly track when other organizations are involved in ways

the work. Also beginning to look at the results from when scientists put out press releases themselves.

- Question for Holly Hartmann and Kalle Matso: When evaluating from a programmatic perspective, are there certain approached to evaluating events that are unusual? For example, how do you measure the impact of a flood? Response from Kalle Matso: With qualitative analysis you start to see patterns and can make categories. Saw that these things were happening. People would say that this didn't think what they wanted to do would happen, but then a rare event happened and everyone became interested. Mandate is needs based. Trying to solve problems of today. Needs t happen in a certain context. This is a little more academic of a question and beyond the pragmatic lens that the organization is trying to look through. Goal with Eve is to finish as opposed to not finishing with Adam.

- Question for Holly Hartmann: When working with a broad mix of stakeholders, people get distracted by new issues coming up. How does this impact expectations for evaluation? Response from Chad English: For example, this week COMPASS put out a paper that we were certain would get press but it was squabbled by the oil spill media. Response from Kalle Matso: Also happens that you can put out a paper for intended user and the intended user isn't interested in the issue at all. Before you decide what program you're going to look at, the collaborative process already needs to be in place.

- Question for Kalle Matso: Is it possible to push the collaborative process a little harder and bring applicants in before they submit proposals? Response from Kalle Matso: Great idea. Some programs do it that way. Complicated enough as is that they couldn't it in place at the time. Decided to build collaboration in other ways. May find that what you are talking about is necessary.