**Panel 6A: Capacity Building Ahsha Tribble**

- Capacity Building – both internal to NOAA (training) and external capacity building (example the "reef manager's guide to coral bleaching")
- Internal Capacity Building (Training) efforts to increase professional competency
- Education – interaction and outreach to external constituents
- How capacity building is done: start with audience – pyramid of audience
- Have successful programs and partners but sometimes it can be fragmented (via budget and/or other offices activities)
- NOAA Media Monitor Pilot Project: in partnership with – semantically analyzes the media over time. Can evaluate the content to determine if it is either positive or negative in tone.

**External Panelist: Susanne Moser, Susanne Moser Research and Consulting**

- Has been working on a local-level to find out what is needed from scientist for adaptation.
- Need to not just establishing interaction but inspiring interaction.

**NRC Report "Informing decisions" – Key findings:**

- We have major need in improving the delivering of decision support.
- We have limited staff to do decision support.
- In recent report "Good Morning America," documented that we are making adaptation decisions without science. Cheap and fast solution – bring in post docs, internships, etc. to fill the needs now. Both in federal and state government.
- Graphic bar chart: The vast majority can read maps but for decision support tools and forecast models, these are fulfilled by sources outside of those surveyed.
- Information needs: want to know vulnerability assessment as important but "they don't know how to do that". Need "hands-on training"
- Action Barriers: due to budget, no staff can attend. Part of the insufficient resources part.
- Missing technical capacities: There aren't enough of us (in academia) who do this (adaptation) and are willing to interact with users.

**Discussion**

**Ahsha: Slide 18:** "So what is the problem?" Big investments but we cannot realize the full potential of these investments without building our capacity for training, education, and outreach!

**Jeanine Jones:** The climate program is not well known in the outside community. As Susi mentioned, applications and academics don't always speak the same language. IPA assignments could be used (EPA used it historically) to assign people from state and local agencies to build understanding of each group. A "coffee clutch" is also a good way to interact – via quarterly meetings

**Susanne Moser:** NOAA is not always the place to go for information. Sometimes better to work with local partners

**Jim Murray, Panelist:** Sea Grant Extension – 375 agents around the country – few are trained as climatologist but we are starting to engage with community via climate listserve with a big response. Land extension almost 1400 agents - working with Chet to explore this opportunity – people in their community are clamoring for climate info. Need to mobilize the assets that we already have. Something being done now – EDEN – takes leadership and commitment to ensure success.

**David Robinson**, **Review Team :** "locals trust locals" state climatologists give many media interviews and have local trust. Many of us are academics. State climatologist need support via the infrastructure from Fed Government. Models and observation networks.

**Marina Timofeyeva, Panelist:** I agree with David. NWS has established trust within communities. We use training to bring the message to the local community in a trustworthy fashion. We use the university and state climatologists in that construct.

**Anthony Janetos, Review Team:** I agree with Slide 18. This is all about building NOAA capacity.

**Ahsha Tribble:** This slide applies to both internal and external capacity.

**Anthony Janetos:** What is the external part?

**Mary Culver, Panelist:** Putting it on web portal is not enough. We know that.

**Laurie McGilvray, Panelist:** We have internal NOAA and our non-federal partners – State Sea Grants, academia, etc. We have these NOAA once removed networks that we support and work with.

**Jake Rice, Review Team:** I agree with message that social science needs more support. – Top down governance- we need people who can communicate with lay-person in areas both in their field and other. Need to communicate to decision-maker. Scientists don't get training in talking with policy-makers.

**Susanne Moser:** Until we change our incentives in academia this will continue. Graduate school trains you for talking scientifically but you are not trained to communication back to the generalisms. Societies can play a role in that training.

**Jerry Schubel, Moderator:** ASLO is training that now.

**Marina Timofeyeva:** Our partnership with State Climatologists we are trying to train this direction with AMS Standards.

**Ahsha Tribble:** There is a program which is Bill Hooke's AMS Policy Program. It does a great job. But there is not a thing like that in NOAA.

**Bill Hooke, Chair:** We have many alumni in the room from that program. And many of them have gone to high places in government.

**Jean Brennan, Review Team:** AMS fellowship is also good. Portal - Even the virtual community needs to be assured of climate change.

**David Herring, Panelist:** frequency and intensity of meetings need to be more than Jeanine's suggestion. We have weekly telecons for portal development that involve cross line office member. This creates "buy-in" from all.

**Margaret Hiza Redsteer, Review Team:** Academics are not rewarded to teach methods of outreach for climate. NOAA should create an incentive for their scientists participate in programs that increase teaching/outreach for climate data use in community.

**Roberta Balstad, Review Team:** Human dimensions – fact sheets in NY area. Used NOAA and local government for advise on what goes into the info sheets. Stressed that NOAA should be prominent on front page due to credibility.

**Jeanine Jones:** AMS policy seminars – should be better advertised.

**Margaret Davidson:** Bill almost had is program cut due to unknown need.

**Jake Rice:** There is not the time available for the people who are experienced. The reality, locals will be the ones who participate.

**Jerry Schubel:** We need to increase the number of people who can do these things.

**Frank Niepold, Panelist:** That a longer time yield to change the education standards in the US (like suggested for the graduate school). We are not talking about the things that have long-term

investments that have yields later on.  Children entering the system are 15 years out until they join the workforce.

**Jim Murray:**  We need to think about the type of people we are hiring in the academic system. Extension specialists, research specialists. Regional specialists would be good to hire.

**Mary Culver:** Huge information needed at local level. But constraints of time for training and delivery of information. Short term solutions like web pages. How can we do the best with what we have?

**Jerry Schubel:** "Disrupting the Classroom" interesting reading for the topic of technology in education.

**Margaret Davidson:** There are education multipliers like aquariums for climate literacy. Also, ideas and interest in NOAA change with administrations. Whatever we put in place, we should look long term.

**Jake Rice:** NOAA Fisheries – employees stratum of experts ie, researcher, etc. Also, there was a time when NOAA was not involved with education.

**Frank Niepold:** America Competes Acts, includes NOAA now, broad legislative mandate to do education.