

Minutes: 24th Meeting of the NOAA Science Advisory Board
The Beacon Hotel, Washington, DC
November 8-9, 2005

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Tuesday, November 8

Dr. Michael Uhart, Designated Federal Officer of the NOAA Science Advisory Board (SAB), called the meeting to order. Dr. Len Pietrafesa, chair of the SAB, made an opening statement and requested a motion to approve the August SAB meeting minutes. Dr. John Snow made the motion, Mr. Michael Keebaugh seconded, and the motion passed unanimously. The SAB members and attendees made opening statements and introductions. A discussion began about the manner in which other agency FACA boards are conducted. Dr. Pietrafesa mentioned a possibility of some cross-collaboration with the National Science Board.

Report of the “Evaluation of NOAA’s Response to the Research Review Report” - *Berrien Moore - Chair, NOAA Research Review Team & Professor, University of New Hampshire*

Dr. Moore reported, via telephone, on the background, findings and recommendations of his panel’s review of the NOAA’s response to the SAB Research Review. To summarize the overall assessment of the NOAA response, the Panel was very favorably impressed with the progress made in implementing recommendations in just one year.

Dr. Jake Rice suggested that the definition of the “external community,” one of the indicated audiences for the NOAA Research Plan and Vision, should be made explicit in the report. Dr. Moore defined the “external community” as primarily the scientific community plus the users that really influence that scientific community are intended. He also noted that it would be appropriate for the SAB to strengthen or focus the report.

Regarding research organization in NOAA, the panel found it hard to understand how the PPBES would address the longer-term research vision. The panel suggests that the SAB continue to look at this. Discussion continued on the need for NOAA to reconcile who manages the research vision and who is responsible for the resources so that the vision is achieved.

The panel is very impressed with the development of a transition policy, however there still needs to be a connection between the research plans and the transition policy. In further discussion on research to operations, Dr. Denise Stephenson-Hawk asked whether the research drives transitioning, or vice versa; for NOAA, operations must drive research. Other SAB members reinforced the importance of making a strong case to Congress about how NOAA operates as a mission agency and that the research supports operations.

Dr. Moore noted that although the consolidation of the Boulder labs was very successful, the panel is concerned about the concept of the ESRL director also being responsible for all of the OAR labs and CIs. Further discussion between Dr. Spinrad and the SAB should continue.

Dr. Moore concluded that although the panel has been completed, the involvement of the SAB continues. He also suggested that the 20-year research vision should be more visionary but should be broken down into 5 year segments to make sure it is not just blue sky. The first 5 years would link to the 5-year research plan.

The chair asked for a motion to accept the panel’s report. Dr. Snow made the motion, Dr. Thoroughgood seconded. The report was accepted unanimously without discussion.

Welcoming Remarks and Statement - *Vice Admiral Conrad C. Lautenbacher, Jr., U.S. Navy (Ret.) - Under Secretary of Commerce for Oceans and Atmosphere & NOAA Administrator*

VADM Lautenbacher provided an update on NOAA's important activities and developments since the August SAB meeting. Topics included: the implications for NOAA of the Energy Policy Act, NOAA's work related to the recent Gulf of Mexico hurricanes, awards received by NOAA employees, and international GEOSS activities.

VADM also welcomed Dr. Geraldine Knatz and Dr. David Fluharty as pending SAB members undergoing clearance and Dr. Rice and Dr. Stephenson-Hawk for returning for a final meeting.

Panel: NOAA's Activities related to Hurricanes Katrina and Rita

Panel Opener - *Mary Glackin – Assistant Administrator, Program Planning and Integration*

Ms. Glackin's opening statement provided a "One NOAA" perspective and addressed the overall successes and challenges for NOAA raised by Hurricanes Katrina and Rita. She discussed NOAA as an operational service agency and listed NOAA activities prior to and in response to the storms, including Homeland Security. She also delineated the hurricane impacts on regional NOAA employees.

Forecasts and Communications - *David L. Johnson – Assistant Administrator, NOAA National Weather Service*

Gen. Johnson's presented NOAA's pre-season hurricane preparedness activities, summary of team members, a brief review of Katrina and Rita, and lessons learned. His presentation included the contributions of NWS, OAR, NESDIS, NMAO, CIO, and others.

Dr. Susan Hanna began a discussion on understanding why 10-20% of New Orleans residents did not evacuate and what NOAA's role is in addressing this problem. VADM Lautenbacher explained that NOAA is not responsible for the emergency responders or for evacuation; NOAA provides information to the first responders who are responsible for evacuation procedures. Still, NOAA is very concerned about this and is always looking for means to reach more people.

NOAA's Support Activities - *Charlie Challstrom – Assistant Administrator, NOAA Ocean Service*

Mr. Challstrom's presentation addressed NOAA's initial response to the hurricanes, including aerial photography, navigation surveys, water level measurements, and spatial analysis. NOAA's navigation surveys were used to re-open rivers and ports to vessel traffic faster than previously thought possible. After 5 major oil spills related to the hurricanes, NOAA provided water quality assessments, and those efforts are continuing. Mr. Challstrom also discussed NOAA's inter- and intra-agency collaboration and support. For example, NOAA provided water level measurements to the U.S. Army Corps of Engineer for its plans to rebuild New Orleans levees.

Restoration & Rebuilding of Living Marine Resources and Marine Dependent Communities - *Steve Murawski – Chief Science Advisor, NOAA Fisheries Service*

Dr. Murawski provided a NOAA-wide overview of studies conducted to assess the effects of hurricanes on living marine resources and communities of the northern Gulf of Mexico dependent upon the marine resource base. He discussed the sampling work on toxic contamination of marine resources as well as surveys to understand the potential loss of coastal wetland habitats. He also overviewed ongoing socio-economic community profile studies. Dr. Murawski stressed that rebuilding efforts must be in partnership with local and regional institutions, with federal agencies providing technical support and funding.

Next Steps - *Mary Glackin – Assistant Administrator, Program Planning and Integration*

Ms. Glackin listed a number of improvements already underway, such as in hurricane intensity modeling and in strengthening internal NOAA communication. A NOAA-wide review of operations and services during Hurricanes Katrina and Rita is underway and is expected to be complete by January 31, 2006.

Discussion

SAB members repeatedly indicated how impressed they were by NOAA's work related to the hurricanes. They encouraged the NOAA story to be widely told internally and externally.

Continuing the discussion on understanding why some people did not evacuate, SAB members indicated the importance of studying the social science aspects related to risk. Dr. Hanna said that this had previously been pointed out by the SAB social science review. Discussion also led to recognition that connections between federal agencies could be improved, since the mechanism already exists. Dr. Stephenson-Hawk encouraged NOAA to focus not only on education of the public but to also include education of public officials.

SAB Approval of Cooperative Institute Reviews: the Cooperative Institute for Climate and Ocean Research (CICOR) - *Frank Kudrna – Chair, CICOR Review & President, Kudrna & Associates, Ltd.*

Dr. Kudrna provided an overview of CICOR and of the findings of the review panel. The panel's recommendations to CICOR included: increasing ties between CICOR and other NOAA entities in the area; continuing to diversify the CICOR program; and strengthening the strategic planning process. The panel's recommendations to NOAA included: related to recompeition of the cooperative institutes, NOAA should review its policy for establishing the level of Task 1 funding and what it expects from providing that funding, and whether this funding should be increased on a regular basis; NOAA and/or the SAB should provide a standard "template" to be utilized by CI review teams and so as to provide consistency; NOAA should provide the Joint Institutes an annual opportunity to present "scientific intellectual issues" to the NOAA Research Council.

Dr. Bob Weller, CICOR's director, explained via telephone that the institute is already responding to the panel's recommendations. For example, a group has been established to work on the strategic planning process. Discussion then addressed how to include social science within the research portfolio at CICOR, considering that NOAA has not formally requested it.

The chair asked for a motion to accept the panel's report. Dr. Snow made the motion, Mr. David Blaskovich seconded. Mr. Blaskovich suggested that the SAB have a follow-up review in a year and Dr. Rice suggested that the SAB convene a group to look again at the SAB guidelines for CI reviews. Dr. Mahoney affirmed that the SAB will be consulted in the development of the criteria for reviews. The report was accepted unanimously.

Wednesday, November 9, 2005

Dr. Uhart called the meeting to order.

NOAA's Physical and Social Science Task Team - *Sandy MacDonald – Chair, Physical and Social Science Task Team & Director, NOAA Global Systems Division*

Dr. MacDonald presented background on NOAA's Physical and Social Science Task Team (PSTT) and the PSTT's preliminary findings. Two findings noted were: (1) NOAA has strengthened corporate management of its research enterprise, decreasing the necessity for organizational moves, and (2) NOAA is in the process of reorganizing part of its research organization, which addresses some of the issues raised by the Research Review Team.

In discussion, Dr. Thoroughgood stressed employing competition to ensure that research money is best spent. So, NOAA needs to come up with agency-wide priorities so that the external

community understands the directions. Dr. Mahoney recognized that NOAA does very little competition externally, however Cooperative Institutes and Sea Grant were then noted.

Dr. Hanna asked how the idea of a critical mass would be addressed with respect to social science. The PSTT ensured that it is in all of the line offices and that the final report will address social science.

Dr. Snow suggested another criterion for research location: “leverage” – there are other agencies that have assets and NOAA should position itself to leverage off the assets of others. Dr. MacDonald said that their draft report mentions this need.

A lengthy discussion followed on research location, including the separation of long- and short- term research and on co-location. Gen. Kelly stressed that the report should explicitly describe the rationale for why to separate, considering the profound impact of the resulting conclusions. Mr. Blaskovich suggested the use of new software to allow for virtual, rather than physical, proximity.

The External Review of NOAA's Ecosystem Research and Science Enterprise - *David Fluharty – Chair, Ecosystem Research and Science Enterprise Review & Professor, School of Marine Affairs, University of Washington*

Dr. Fluharty began by noting that a standing working group of the SAB on Ecosystems could be a useful continuation to this External Review (eETT). He then followed with a presentation of the background and preliminary findings of the eETT. He noted that there is still much left to do, for example the eETT has not yet looked at all of NOAA’s programs and the PPBES process or fully at international counterpart examples.

As the findings contained a focus on the need for NOAA to organize its science regionally, discussion addressed whether the eETT had looked at how to make this transition operationally. Dr. Fluharty explained that, following an incremental approach, institutional buy-in at the local and regional level will evolve over time. Dr. Hanna reinforced the importance of this transition and in achieving that buy-in. The report will provide examples of integrated assessments to serve as examples of what would be provided at the regional level. The usefulness of providing trade-off analysis in these regional assessments was also mentioned. Dr. Rice noted, however, that until NOAA’s clients can come together and discuss common needs, integrated advice and assessments will not be possible.

Regarding the location issue, Dr. Spinrad said that valuable advice from the eETT would be to explain what questions NOAA should ask to identify research location and to pinpoint the gaps and redundancies.

A number of other federal agencies that are also adopting an ecosystem approach were listed, including National Science Foundation, Fish and Wildlife, and the US Forest Service. Dr. Snow suggested that NOAA should serve as a catalyst for bringing together a federal ecosystem research council.

Dr. Stephenson-Hawk requested that the White Papers, which look at the issues NOAA will face in 20 years, be sent to her and the other SAB members once completed.

Reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act - *William Hogarth – Assistant Administrator, NOAA Fisheries Service*

Dr. Hogarth began by asking for the SAB’s advice on the Magnuson-Stevens Fishery Conservation and Management Act (MSA), and in particular in the area of data collection. Dr. Hogarth compared the Administration’s MSA bill with that of Senator Stevens that was expected to be introduced shortly. Reconciliation between the two bills is possible, although that in part depends on what the House version is like.

The Administration's bill, unlike the Senate's, addresses ecosystems directly. Although NMFS has been moving toward an ecosystem approach to fisheries management without this explicit language, the aspect of the Administration bill would help in the effort.

Presentation on NOAA Request for a Standing Data Archiving and Access Requirements Work Group - *Thomas Karl – Director, National Climatic Data Center*

Dr. Karl requested the SAB to form a standing working group that would give NOAA advice on archiving and access requirements. He explained that the capabilities for archiving and access are increasing rapidly, but there is also an exponential growth of data and data products. There are other reports that address this issue, principally from the NRC. There is also a government internal review of CLASS due in May 2006.

Mr. Blaskovich reminded the SAB that the RRT panel recommended that NOAA address what to archive. In addition, this would serve as an opportunity to consolidate needs for data archiving decision-making across NOAA activities; for example, the eETT has also been looking at the need for ecosystem data archiving.

This working group would be coupled with the data management group of the NOSC, and the NOSC is supportive of this proposal to get an external viewpoint.

Dr. Snow makes a motion to form the working group, and Mr. Keebaugh seconds the motion. Mr. Blaskovich asked for more thought on the composition of the working group. The SAB requested that NOAA provide a list of nominations for membership, in addition to a Terms of Reference. The motion passed unanimously.

Public Comment

There was one public comment from Dr. Michael Crosby, Executive Officer of the National Science Board. Dr. Crosby made an oral statement and provided a handout. The NSB is currently interested in looking at hurricane science and engineering. The purpose of this statement is to improve collaboration with agencies and organizations, including the SAB. The NSB duly understands the integral role of NOAA science and is looking to interact with the SAB's working group on hurricane intensity research (HIRWG). The timeline of the NSB's study is aggressive. The first workshop will be in Washington, DC in January that will likely focus on the federal agency family, multidisciplinary approaches and interactions. Two other meetings will follow in the winter and spring. The final report is expected to be brought to the August NSB meeting before being sent to Congress.

Dr. Snow, chair of the HIRWG, is looking forward to the interaction. Dr. Kudrna asked if there is a public policy side to the charge. There will likely be some examination of the issue, but the NSB is particularly interested in the major scientific questions, including those of social science. Dr. Mahoney thanked Dr. Crosby for the collaboration.

SAB Approval of Cooperative Institute Reviews: the Cooperative Institute for Limnology and Ecosystems Research - *Carl Richards – Chair, CILER Review & Director, EPA Mid-Continent Ecology Division*

Dr. Richards made his presentation via telephone. He provided an overview of CILER and then explained the review's recommendations. The recommendations included: encouraging a diversity of disciplines among its scientists, developing a new CILER strategic plan, and increasing CILER's partnerships with other parts of NOAA.

In discussion, Dr. Thoroughgood noted that there are many recommendations that do not support the assertion that CILER is a flourishing institution. Dr. Richards responded that the panel concluded that CILER has room for improvement but is doing good work. Dr. Rice pointed out the lack of social science research at CILER, particularly considering work on multiple use and

integrated management in the region. Dr. Richards responded that the recommendation of beginning research in new areas includes social science.

Dr. Scavia, director of CILER, affirmed that he the panel had presented the recommendations to him earlier and that he thought that the recommendations were well-directed. Discussion then shifted to funding, noting that about 90% of the funding comes from NOAA and that the budget is about \$8 million.

Dr. Thoroughgood moved to accept the report, and Dr. Kudrna seconded the motion. The report was accepted unanimously without discussion. Dr. Thoroughgood then asked how NOAA evaluated the need for and relevancy of CILER, as well as other institutes. Dr. Kudrna encouraged the development of standards by which to evaluate CIs. Dr. Thoroughgood suggested leveraging as a criterion for evaluation. The SAB decided to request from NOAA a two-pronged response, in which CILER responds to NOAA on the recommendations and NOAA responds to the SAB in time for the next SAB meeting.

Report on the Review of the National Sea Grant College Extension Program and a Call for Greater National Commitment to Engagement - Ronald Baird – Director, National Sea Grant College Program

Dr. Baird provided a presentation to the SAB with the purpose of informing on the central precepts from a review of Sea Grant’s extension program and of stimulating discussion by SAB on issues including the importance for NOAA of engagement with external constituencies and how to improve the future effectiveness of NOAA’s science to user interface.

Following on the discussion about NOAA’s ecosystem science enterprise, Dr. Fluharty asked how an ecosystem approach to management would work in the Sea Grant extension system. Dr. Baird replied that regional centers could be established that specialize in a particular issue and so provide support to all Sea Grant extension agents. Dr. Fluharty suggested that the extension agents could serve as a single point of contact for clients interested in ecosystem-based science information.

Asked what stopped a greater commitment to engagement, Dr. Baird replied that there are not enough resources or people. Gen. Kelly said that NOAA has discussed communication and outreach and that NOAA is addressing these issues through reorganization within both OAR and headquarters. Following the problem of lack of resources, Gen. Kelly said that the challenge is to coordinate and effectively utilize the various outreach programs in NOAA.

Sea Grant extension agents were seen as an effective model of credible outreach, as they span across the science and the general community and they are significantly funded by a non-NOAA entity. Seagrant extension agents are not federal employees, but affiliated with local universities, giving them greater credibility with stakeholders. Dr. Thoroughgood asked how to reach the goal of wiring Sea Grant better into a national effort and view. Dr. Kudrna suggested that there be a continuing topic at SAB meetings on how NOAA engages its constituencies. This discussion should integrate outreach and education.

Recap of Meeting Decisions and Actions - Michael Uhart – Executive Director, NOAA Science Advisory Board

Dr. Uhart provided a list of the meeting decisions and actions based on draft meeting minutes. The list below was revised by the SAB members and was then approved by them.

1. The SAB accepted the report of Berrien Moore’s panel, “Evaluation of NOAA’s Response to the Research Review Report.” In transmitting the report to NOAA, the SAB Chair will:
 - clarify that the “external community” is primarily the scientific community plus the users that really influence that scientific community;

- recommend the development of the research plan and vision should include more involvement by these external communities and the research plan should include a clear set of science priorities and that research is a component of the larger science enterprise;
 - state the SAB's concerned with the declining NOAA research budget and that NOAA needs to make stronger case that research supports the NOAA mission, especially with OMB; and
 - state that the SAB will continue to monitor NOAA's responses to the Research Review.
2. The SAB accepted the reports of the CICOR and CILER review panels and will transmit the reports and their recommendations to NOAA. The transmittal letter to the OAR AA will include the request that the CIs respond to each of the recommendations by letter before the next SAB meeting. (Chair, SAB)
 3. The SAB recommends the PSTT consider including the potential for the leveraging of resources as a criterion for the location of research in NOAA. (Chair, PSTT)
 4. The SAB recommends that a future SAB meeting include the following topics or be organized about the following themes: (SAB Secretariat)
 - NOAA's plans to coordinate and fully utilize extension, education, human resource development, and outreach efforts that currently reside in various line offices and programs
 - Discussion of the coordination and reconciliation of peer review and science advice provided by NOAA and its partners to various user groups
 - Discussion of the coordination and reconciliation of advice provided to NOAA by the several NOAA advisory groups
 5. NOAA will provide the SAB with its response to the recommendations of the CICOR and CILER review panels before the next SAB meeting. (AA OAR)
 6. Provide the SAB Chair with reports of NOAA-conducted or NOAA-sponsored studies of Human Health related impacts (M. Glackin)
 7. Provide the SAB with the six white papers prepared for the eETT (S. Murawski)
 8. NOAA will provide the SAB Chair with a draft Terms of Reference for and a list of nominees to the Data Management and Archiving Working Group. (T. Karl)
 9. The SAB will form a Data Management and Archiving Working Group. The SAB will approve the Terms of Reference and select the members of the WG. (Chair, SAB)
 10. Provide the SAB Chair with a copy of the NOAA-EPA MOA on coastal community development. (R. Baird)

Meeting Adjourned.