

## Minutes

### 23<sup>rd</sup> Meeting of the NOAA Science Advisory Board NOAA Northwest Fisheries Science Center Seattle, Washington August 8-9, 2005

#### Monday, August 8

*Science Advisory Board members present:* David Blaskovich, Otis Brown, Susan Hanna, Michael Keebaugh, Frank Kudrna, Len Pietrafesa, Jake Rice, Bill Ruckelshaus. *Line Office representatives (Assistant Administrators or designees) present:* Mary Glackin (PPI), DL Johnson (NWS), John Oliver (NMFS), Richard Rosen (OAR), Richard Spinrad (NOS), Greg Withee (NESDIS). *NOAA Senior Leadership present:* Dr. James Mahoney (NOAA Deputy Administrator), Brig. Gen. Jack Kelly (Deputy Under Secretary for Oceans and Atmosphere)

Dr. Michael Uhart, Designated Federal Officer and Executive Director of the NOAA Science Advisory Board (SAB) called the meeting to order at 8:00am. Dr. Len Pietrafesa, Chair of the SAB, made an opening statement and thanked Dr. Usha Varanasi, director of the Northwest Fisheries Science Center, for hosting the meeting.

Dr. James R. Mahoney, the NOAA Deputy Administrator, welcomed the SAB and participants. He noted that the meeting's agenda reflects Pacific Northwest regional issues, including advancing stewardship. There has been diligent work to improve SAB mechanisms so as to allow for maximum benefit for the meetings, such as a revised presentation format. Dr. Mahoney concluded by explaining that he is resigning from his appointment as NOAA Deputy Administrator once a replacement is appointed and confirmed.

#### **NOAA Priorities for an Ecosystem Approach to Management**

Mary Glackin, Assistant Administrator of NOAA Program Planning & Integration, provided a brief update on the two subcommittees of the Interagency Committee on Ocean Science and Resource Management Integration: the Joint Subcommittee on Ocean Science and Technology (JSOST) and the Subcommittee on Integrated Management of Ocean Resources (SIMOR). NOAA is unique in that it has co-chairs on both.

John H. Dunnigan, NOAA Ecosystem Goal Team Lead, reviewed NOAA's progress toward an ecosystem approach to management since the last update at the November 2004 SAB meeting. He listed a variety of opportunities for NOAA over the coming months and asked the SAB for suggestions of additional planned activities. He also asked the SAB to: comment on the Ecosystem Goal's science priorities, identify a process on how the Ecosystem Goal might engage the SAB for advice on ecosystem indicators; and advise on how the Ecosystem Goal can meet its several identified challenges.

SAB discussion centered on ecosystem indicators: how best to select the indicators and their connectivity to governance. NOAA will seek the advice of the SAB on the ecosystem health indicators as the process progresses.

#### **SAB Approval of Cooperative Institute Reviews: the Joint Institute for Study of the Atmosphere and Ocean (JISAO) and the Joint Institute for Marine Observations (JIMO)**

Dr. Otis Brown, Chair of the JIMO Review, presented his general observations on JIMO from the May 2005 review as well as the review's recommendations. Dr. Brown recommended that the SAB accept the report. In discussion, it was noted that the challenges and recommendations are strategic in nature and that lessons learned for the other institutes may be useful. JIMO has become increasingly interested in participating in the science planning process. Dr. Mahoney noted that the idea of joint planning is very important. Dr. Pietrafesa made a motion to accept the report. Mr. Keebaugh seconded, and the report was unanimously accepted without discussion.

Dr. James Kinter, Chair of the JISAO Review, provided a summary of the review's results via conference call. He praised the programs and research as being of the highest quality and listed a series of challenges for the institute. The panel recommends that the Institute respond to challenges that include the preparation of a

comprehensive strategic plan, maintenance of a balanced research portfolio, and relocation of its offices to the UW campus. Dr. Mike Wallace, director of JISAO, noted that there is progress in relocating JISAO and reflected on the upcoming re-competition and the involvement of JISAO in planning. Dr. Brown made a motion to accept the report. Dr. Kudrna seconded, and the report was unanimously accepted without discussion.

Dr. Pietrafesa stated that the SAB wants to be informed by NOAA on what NOAA plans to do with the reviews.

### **Safe Sanctuaries 2005 and NOAA Emergency Response**

Dr. Robert Pavia, Environmental Scientist for NOAA Ocean Service, provided an example of how NOAA strategically plans for infrequent but highly important disasters. He described the Safe Sanctuaries 2005, an exercise that simulated a cargo vessel running aground in the Florida Keys National Marine Sanctuary.

In discussion, Dr. Hanna suggested that NOAA consider approaching disaster responses as experiments: by using an experimental design, NOAA could determine more scientifically how to improve the response. Dr. Rice noted that the techniques for risk assessment and decisions support and programming are universal, but forecasting tools and risk assessment tools are being developed independently.

### **NOAA's Role in Open Ocean Aquaculture: Legislation and Research**

Susan Bunsick, Policy Analyst for the NOAA Aquaculture Program, provided background information on offshore aquaculture and then presented details on the legislation recently introduced by NOAA (S. 1195 introduced 6/8/05). This bill would grant NOAA authority to issue offshore permits, provide environmental and other safeguards, and support development of offshore aquaculture.

Dr. Hanna described the apprehension of Oregon coastal communities to offshore aquaculture and encouraged NOAA to invest in research to understand the perceptions of aquaculture in coastal communities and real economic conditions for them. Dr. Rice commented that risk assessments and tradeoffs are now absent from NOAA's program; Ms. Bunsick responded that there are many kinds of risk assessment and there needs to be an effort to pull together what NOAA does know as well as develop new knowledge. Mr. Ruckelshaus asked if there is a research plan; Ms. Bunsick explained that there is currently a plan for the plan.

### **NOAA's Annual Guidance Memo**

Paul Doremus, Director of Strategic Planning for NOAA Program Planning & Integration, provided an overview on the Annual Guidance Memo (AGM), a document that articulates NOAA's annual priorities so as to achieve the agency's long-term strategic goals.

In discussion, Mr. Doremus clarified that when soliciting agency input for the AGM, the goal teams and councils provide their priorities and there is then consultation with the NOAA leadership. Mr. Keebaugh asked how priorities have changed from last year; Mr. Doremus responded that the issues have been more clearly defined and articulated this year.

### **The SAB Climate Working Group**

Dr. Otis Brown, Chair of the Climate Working Group (CWG), reported on the activities of the group and in particular, the March 2005 CWG meeting. He noted that the SAB, when accepting the report, should consider that the charge to NOAA is for the Climate Program to consider the recommendations of the CWG and to implement them, when practicable and appropriate.

Mr. Blaskovich asked how the proposed "Community Re-Analysis" project would be different from what has been used. Dr. Brown said that the main difference is the need for active consideration; there is no fundamental difference in how it works. Ms. Glackin explained that the proposal came from a community workshop in Boulder in summer 2004. Dr. Pietrafesa recommended an increased linkage between the CWG and the SAB's Ecosystem Science and Research Review. Mr. Withee noted the very good set of slides on

stewardship issues in climate; he suggested that NOAA challenge the SAB or put it on the next agenda, so as to raise the level of the issue.

### **The External Review of NOAA's Ecosystem Research and Science Enterprise**

Dr. David Fluharty, Chair of the Ecosystem Research and Science Enterprise Review (Ecosystem Review), gave a synopsis of the charge, progress, and timeline for the recently convened team. The Ecosystem Review members first met June 20-22, 2005 and expect to present a preliminary report to the SAB at the November SAB meeting.

Dr. Pietrafesa noted that the reviewers intend to follow a remarkably tight schedule. He also suggested that the reviewers get comments and suggestions from others, such as the national association of marine labs. In discussion, Dr. Fluharty elaborated on how the final report will analyze NOAA's vision for research looking 25 years ahead. This allows for the report to sidestep some of the organizational issues – the report would instead lay the foundation for such an organizational shift. Further concerns about the very aggressive timeline were again raised; Dr. Fluharty responded that the review panel will do its best to deliver a competent report in that time period and if they feel they cannot, they will let NOAA know.

### **Public Statements**

1. Stephen Taufen, founder of the Groundswell Fisheries Movement, provided comments on cautionary notes on farmed salmon. Farmed salmon are a biological threat to wild salmon because of, for example, interbreeding. Biological and economic models are needed. There is a solution for tracking down escaped fish. Halibut groups are using pit tags. We should start tagging them now. The main issue for the Groundswell Fisheries Movement is the negative net balance in seafood. Most of the trade is within multinational corporations, so that the true movement is not reported. This means that there is an inaccurate valuation. We need to look at the deeper set of economics. There were no comments or questions from the SAB.
2. Robert Alverson of Fishing Vessel Owner's Association Seattle provided a public statement. His organization objects to the exemption to the Jones Act within the aquaculture bill. The exemption is of great concern up and down the coast of Oregon. Are we going to have to compete unfairly against Panamanian platforms? These concerns were expressed to Senator Steven. Senators Snowe and Stevens recommended against exemption of the Jones act so that US fishers could compete on a level playing field. There were three amendments proposed by Senators Stevens, Snowe, and Inouye. He requests the SAB to recommend to NOAA support these amendments. There were no SAB questions or comments.
3. Barney Olsen, vice president of the Deep Sea Fisherman's Union, voiced the Union's concern that the Offshore Aquaculture Act does not require sufficient environmental and economic analysis. There are no safeguards on the competitive balance between wild and farmed salmon. The effects on the other fisheries will be quicker. There were no SAB questions or comments.
4. Anne Mosness made a public statement about the National Offshore Aquaculture Act. There needs to be good science. It is stated that this bill is about food security, but for whom? It does not provide security for her family, having cheap subsidized farm fish in the market place. Halibut and tuna will be equally as devastated. The wild fish are there, but there is no market because of cheap, farmed fish. There are many organizations that are opposed to aquaculture. The cautionary approach must be employed. There is no mention of this in the legislation. The decision is up to the Secretary of Commerce and they then can be ignored. She urged the SAB as scientists to ask NOAA to prepare the Legislative Environmental Impact Statement before the bill is voted on in Congress. The aquaculture companies are being supported by

corporate foreign-owned feedlot operations.

Dr. Rice noted that there is a common theme among all of these public interventions. There is merit to the cautionary approach and an EIS before the policy is put into place. He asked the presenters if they have any comment on a comparison of the risks they are talking about and those that NOAA is already dealing with. Mr. Taufen noted that USDA has to go through that analysis. They must show how domestic and foreign programs must be analyzed together. He would encourage regional economic analysis. NOAA should live up to the same kind of analysis that others have to. Foreign governments will take over just like they always have. This is an agricultural concern. Dr. Hanna said that the ecological risks are not the only risks for those living in coastal communities. Without studying economic aspects, interaction with coastal communities and economies, the process is proceeding in an uninformed way. Has NOAA invested in the economic research? This is a real concern for capture fisheries.

### **Discussion of afternoon topics**

Susan Bunsik said that NOAA plans to hold stakeholder meetings on the National Offshore Aquaculture Act. A programmatic Environmental Impact Statement will be undertaken under NEPA. Ms. Mosness asked why the LEIS is not done before Congress votes on the Bill as 16 Congressmen had requested of NOAA.

Dr. Rice returned to the issue of ecosystem health indicators: the initial timetable has been stalled, and finding regional coordinators has been slow because of interagency issues. He asked what the SAB could do to help NOAA move forward through the bureaucracy. Ms. Glackin said that the interagency process is challenging. She noted that the idea of an ecosystem approach to management is not in the Ocean Action Plan and that it is often falsely equated to a "green" approach instead of a way to address multidisciplinary problems. Ms. Glackin said that there is a FACA advisory group established under the Navy, the Ocean Research Advisory Panel.

Dr. Kudrna noted again the very aggressive schedule for the Ecosystem Review. He asked what topics would be coming forward from NOAA next so that such short timeframes can be avoided. The new Working Groups on Hurricane Intensity Research and Ocean Exploration were listed. The SAB will be sent a schedule of future cooperative institute reviews and will be asked to volunteer to serve.

The meeting adjourned for the day at approximately 5:00 PM.

### **Tuesday August 9, 2005**

*Science Advisory Board members present:* David Blaskovich, Susan Hanna, Michael Keebaugh, Frank Kudrna, Len Pietrafesa (chair), Jake Rice, Bill Ruckelshaus. *Line Office representatives (Assistant Administrators or designees) present:* Mary Glackin (PPI), Geoffrey Fuller (NMAO), DL Johnson (NWS), John Oliver (NMFS), Richard Rosen (OAR), Richard Spinrad (NOS), Greg Withee (NESDIS). *NOAA Senior Leadership present:* Vice Admiral Conrad Lautenbacher (Ret.) (NOAA Administrator), Dr. James Mahoney (NOAA Deputy Administrator), Brig. Gen. Jack Kelly (Ret.) (Deputy Under Secretary for Oceans and Atmosphere)

Dr. Michael Uhart, Designated Federal Officer and Executive Director of the NOAA Science Advisory Board (SAB) called the meeting to order at 8:45am. Dr. Pietrafesa welcomed Vice Admiral Lautenbacher.

### **Remarks from the NOAA Administrator**

Vice Admiral Conrad C. Lautenbacher, Jr., U.S. Navy (Ret.), the Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator, stated that the SAB meetings are important for NOAA senior management to interact with the SAB and members of the public. He presented a variety of subjects that

are important to him and to NOAA, such as FY 06 appropriations, leadership changes, and new developments within the agency. Two new working groups have been established under the SAB, on hurricane intensity research and on ocean exploration. Is there something else NOAA can do to improve intensity forecasts? The latter group will provide advice concerning emerging ocean exploration-relevant technologies and general priorities for ocean exploration. He provided a short update on GEOSS and then on the international interagency activities with which NOAA is associated. He then touched on a number of timely activities for NOAA.

### **Status of NOAA's Plan to Strengthen the Tsunami Warning Program**

Brig. Gen. David L. Johnson, USAF (Ret.), NOAA Assistant Administrator for Weather Services, gave an overview of the Tsunami Warning Program. Dr. Eddie Bernard, Director of the NOAA Pacific Marine Environmental Laboratory, continued the presentation, describing the transition of research to operations. He noted that since December 26, there was a National Science and Technology Council (NSTC) report of the Subcommittee on Disaster Reduction (SDR) and the US GEO that called for a review. Having such reviews are very productive; these requests might come down to the SAB.

Suggestions were provided about inundation mapping and database management. Mr. Keebaugh asked what NOAA is doing for an organized public relations campaign. After a short discussion, VADM Lautenbacher suggested that NOAA needs to do more to inform the public of its tsunami activities.

### **Response to 1999 SAB Recommendations on Salmon Recovery Science**

Dr. John Stein, Deputy Director of the Northwest Fisheries Science Center (NWFSC), summarized the progress made relative to the SAB's 1999 recommendations. He gave examples of NOAA's work to build and strengthen connections. Since 1999 there has been an emphasis on the oceanic portion of the salmon life cycle, one of the recommendations. NOAA has prepared a revised science plan. They also developed a NWFSC social science research plan.

Dr. Hanna asked about interagency regional coordination on research; Dr. Stein responded that progress is being made, especially in the observations area. What is needed for the Columbia River is a shared strategy group. Dr. Stein confirmed that forecasts are reflected in management decision-making. Dr. Rice asked if more was accomplished because of the SAB recommendations. Dr. Stein said that the momentum was already there and so it would have been done anyway, but perhaps not to this extent without the SAB's advice.

### **Salmon Recovery from Summit to Sea -- Lessons from Puget Sound**

Dr. Usha Varanasi, Director of Northwest Fisheries Science Center, and Dr. Philip Roni, Research Fishery Biologist at the NWFSC, presented information on science and management for recovery of west coast salmon populations and discussed successes and opportunities for next steps in Puget Sound.

Bob Lohn explained the context of the science that is being accomplished by NOAA and its partners. He described the challenges to the scientists and the conduct of research. Typical political boundaries do not coincide with ecosystem boundaries. It is based on place-based decision-making and we will need to replicate that model. A shared strategy is the basis for the collaborative work and negotiations. Mr. Ruckelshaus elaborated that this effort is an example of what people will respond to if they are challenged. The shared strategy is a structure that allows for discussion, in which watershed members are being asked how to meet the goals instead of being told how to do it.

Dr. Rice said that this is consistent with what it means to take an ecosystem approach, including human as well as natural processes. He is impressed in what has been done in the 6 years, but it is the easiest case. Discussion continued on the adaptive qualities of the management schemes and how NOAA monitors the commitments within each watershed. One of the keys to success highlighted is the close partnership between scientists and practitioner that has been achieved while still keeping independent preserve scientific neutrality.

### **SAB Transitions**

Vice Admiral Lautenbacher thanked Dr. Denise Stephenson-Hawk (not present) and Dr. Jake Rice for their two terms of service on the SAB. He presented Dr. Rice with a plaque. Dr. John Snow (not present) and Mr. David Blaskovich have agreed to serve second terms.

### **NOAA Fisheries Science Centers' Salmon & General Science Needs**

Dr. William Fox, Director of the Southwest Fisheries Science Center, provided information on what the Alaska, Northwest, and Southwest Fisheries Science Centers need to do their jobs better on salmon and other fish species. Their overall unmet needs are ship time, observing systems, and pacific salmon research. Data management for observing systems is a significant difficulty.

Dr. Rice said he was impressed by the summary slide on regional research. He suggested a risk analysis could help prioritize and acquire resources. Doing a comprehensive integrated risk assessments would help NOAA in deciding what issues should be tackled. Dr. Stein said that they have tried to do that, but it is a challenge.

### **Autonomous Underwater Vehicles (AUVs) at NOAA**

Justin E. Manley, Chair of the NOAA AUV Working Group, provided information about how AUVs are and can be used at NOAA. He requested SAB input on accelerating the adoption of AUVs within NOAA, overcoming the scientific obstacles to wider AUV use, and where the strategic pushes should be in NOAA.

Discussion addressed the cost effectiveness of AUVs as well as their intended use. Mr. Keebaugh cautioned against having a solution and then search for the problem. Dr. Pietrafesa noted that he would solicit further input from SAB members.

### **Remotely Operated Aircraft (ROA) Activities at NOAA**

Dr. Alexander "Sandy" MacDonald, Director of the NOAA Forecast Systems Lab, presented information on the NOAA ROA Steering Committee (which he co-chairs) and Working Groups. NOAA conducted flight demonstrations in the spring and summer of 2005 and learned many lessons. Questions were asked on the observing capabilities for classic parameters such as temperature and wind as well as dispersion and plume characterization.

### **Summary of Meeting Decisions and Actions**

1. NOAA will request the SAB's comments on the development of ecosystem health indicators.
2. The SAB accepted the findings and recommendations of the JISAO Review Panel and requests NOAA to inform the SAB of its response to the recommendations by letter prior to the spring 2006 SAB meeting. In addition:
  - a. The SAB recommends that NOAA engage JISAO in strategic planning through labs, OAR and NMFS management, and Cooperative Institutes management
  - b. NOAA should establish a timeline for re-competition of Cooperative Institutes to provide at least one year to shut down, if necessary.
3. The SAB accepted the findings and recommendations of the JIMO Review Panel and requests NOAA to inform the SAB of its response to the recommendations by letter prior to the Spring 2006 SAB meeting.
4. The SAB recommends that NOAA review its Joint Institute guidance and consider including specific metrics, a report template, and NOAA's agency review as elements of the SAB Joint Institute review and provide specific format recommendations to the SAB.

5. The Board acknowledges the risks posed by the current absence of a regulatory regime for offshore aquaculture and supports NOAA's efforts to develop one as quickly as practicable. The SAB recognizes that the development of offshore aquaculture is controversial to some coastal regions. The SAB recommends that NOAA conduct analysis of the potential interactions of new aquaculture development and existing marine resource businesses in the coastal economic context.

The meeting adjourned at approximately 3:00 PM.