

Draft Summary
North Pacific Research Board
Science Panel Meeting
Alaska Fisheries Science Center
Seattle, Washington
August 29-31, 2006

The Science Panel met on August 29-31, 2006 at the Alaska Fisheries Science Center in Seattle, Washington. The meeting was chaired by Rich Marasco and the following other members were in attendance: Vera Alexander, Shannon Atkinson, Dick Beamish, Jim Berner, Michael Dagg, Anne Hollowed, Seth Macinko, Mary Pete, John Piatt, Andre Punt, Tom Royer, Michael Simpkins, Pat Tester, David Witherell and Doug Woodby. The meeting was staffed by Clarence Pautzke, Carl Schoch, and Francis Wiese.

1. Call to Order, Approve Agenda, Election of Officers

The agenda item on the Gulf of Alaska integrated ecosystem research program was moved to follow consideration of the 2007 RFP. Rich Marasco and Doug Woodby were reelected to the positions of Chairman and Vice Chairman for another one-year term.

2. Budget Overview

Clarence Pautzke presented an overview of the NPRB budget and amounts that may be made available for the Bering Sea Integrated Ecosystem Research Program (BSIERP) component of the 2007 RFP and the non-IERP components. It was noted by some members of the Panel that the Board may need to revisit its breakdown in funding by LME now that some other science programs such as the EVOS Gulf Ecosystem Monitoring (GEM) program appears to no longer be funding marine research in the Gulf of Alaska.

3. 2007 Request for Proposals

Basis for Research Priorities in Draft 2007 RFP

Francis Wiese reviewed the documents that were used as the basis for developing research priorities for the 2007 RFP. A table was presented that maps research priorities of RFPs through 2007 back to the Board's 2005 Science Plan. Research priorities identified by the North Pacific Fishery Management Council, U.S. Marine Mammal Commission, the State of Alaska, LTK workshops, and NPRB-funded syntheses and indicators workshops, and other entities and sources, all served as the basis for the research priorities in the draft 2007 RFP.

Overview of Other Agency Programs

The Panel was provided with two-page summaries of research anticipated by the Alaska Fisheries Science Center, National Science Foundation, and Bering Ecosystem Study (BEST). It was noted that BASIS, a major salmon tracking and identification program of the Auke Bay Laboratory, may have very reduced levels of funding in next year's budget, due to the general reductions in NOAA's budget for research.

Ecosystem Modeling Committee Report

Dan Goodman, chairman of the Board's ecosystem modeling committee, reported to the Panel on the model evaluation criteria and supporting documentation that was developed by the committee for potential insertion into the 2007 RFP component dealing with the BSIERP. The Panel agreed to include

the criteria in the 2007 RFP and the supporting document as an appendix. The Panel noted that with all the detail concerning models, it may appear to applicants that the BSIERP is focused too much on models rather than on other research approaches such as field and process studies. Therefore, the Panel recommended placing a preamble in the RFP noting that the modeling criteria were not intended to place undue emphasis on the modeling components in the overall proposal, but rather to indicate that to the extent models will be used (and not every research component or process will necessarily be conducive to modeling), they should meet the very high standards reflected in the criteria. The Panel also noted that the background paper for the modeling criteria (appendix 1) may need to have some of its references to 'fisheries models' broadened to include more than just fish, so that the applicants recognize the need for more ecosystem-related models. The Panel supports the role of the Ecosystem Modeling Committee in reviewing modeling components in the pre-proposals and full proposals.

Potential NPRB-NSF Partnership

Clarence Pautzke reported on discussions with the National Science Foundation about a potential partnership to leverage funds for the Bering Sea Integrated Ecosystem Research Program. The Board has about \$14-16 million earmarked for the BSIERP and NSF will be supporting the BEST program for about \$10 million in research funds and another \$2 million in ship time being held in reserve.

The main concern raised by the Panel was that without a combined announcement of opportunity for funding and selection process for the eventual program participants, there is the risk that the two separate programs would not mesh very well. In the event that happened, the NPRB, with its emphasis on the upper trophic levels, would not have the research, modeling and data reporting that would be required from the NSF BEST program which will focus on the lower trophic levels. The Panel concluded that it was better for NPRB to go it alone and have its own vertically-integrated program, albeit more thinly funded and executed than desired, so that it could better ensure the inclusion of all trophic levels from physical oceanography through humans.

Here are the general concerns raised by the Panel and their recommendations on how to proceed:

1. The Science Panel recommends a joint announcement, and proposal review and decision process if there is to be a partnership with NSF for the BSIERP. A true partnership would minimize the risk of a mismatch between the two programs. NSF has joint programs with EPA, NOAA, NOPP, ONR and the European Union. NPRB should be treated on the same footing. NPRB is established by federal legislation and uses federal funds. It has developed scientific standards commensurate with those used by NSF and its recommendations must be confirmed by the U.S. Secretary of Commerce before a project may be funded.
2. The NPRB BSIERP RFP as now structured would allow for the program to be located anywhere in the Bering Sea and Aleutian Islands large marine ecosystem. NSF is limited to the eastern Bering Sea shelf between the Aleutians and St. Lawrence Island. There is a mismatch between geographic scope of the two programs.
3. The Science Panel believes there is a difference in philosophy between NSF and NPRB. While both programs strive to carry out scientifically meritorious research, NSF does not necessarily need an applied product to be successful, whereas the NPRB endeavors to support science with a direct application to resource management, based on its enabling legislation.
4. Short of a combined announcement and decision process, there must be assurances that investigators supported by both organizations will work together as a team to produce a seamless program. Each team has to recognize the needs of the other and must be responsive. There is

concern that the program may be perceived as a one-way street with the upper trophic level (UTL) NPRB team needing outputs from the lower trophic level (LTL) NSF team, but not the reverse.

5. NPRB plans on annually reviewing its BSIERP program and may require adjustments as necessary if something is going wrong. NSF is viewed as requiring annual progress reports but being hands-off in making course corrections to its programs. These are two very different approaches to project management. Does NSF have any control over their teams once they are funded?
6. The Science Panel believes that the NPRB ecosystem modeling committee's model evaluation criteria need to be applied to all models if uniform high standards are to be achieved in all modeling components.
7. Both teams need to be using the same climate data and scenarios to force their respective models. It has to be clear who is doing the climate projections – NSF or NPRB?
8. If UTL and LTL projects are chosen separately, there is insufficient time for the investigators supported by the respective organizations to get together before the 2008 field seasons and ensure a coordinated and seamless program. While NPRB intends to choose one proposal submitted by one large team, NSF will be choosing from many individual proposals to eventually comprise a large team.
9. Data sharing is a big concern, and there would need to be a guarantee of timely data sharing between teams and between modelers and field programs. Data sharing would be easier to achieve if everyone is on one big team.
10. In the end, the NPRB Science Panel concluded that without a fully integrated announcement, proposal review, and team appointment from the beginning, the risk would be too high for a program failure at the upper trophic level. Therefore, they recommended that it would be better for NPRB to go ahead alone with a less well-funded, thinner program that encompasses all levels of the ecosystem, while providing an incentive, as described below, for some of the NSF investigators to provide product and data useful to the NPRB program.

NPRB Science Panel recommendation on BSIERP:

- a. Reduce \$16M BSIERP RFP to \$14M and ask for fully vertically integrated proposals for BSIERP as it stands in current draft RFP. These would cover all trophic levels and could be anywhere in Bering Sea and Aleutians LME.
- b. Request NSF to include some language in their announcement indicating that if proposals that get funded are relevant to the NPRB program (and they will have an indication of which full NPRB proposals are being invited and considered by mid-December), there is an option for NSF-funded PIs to propose to NPRB for \$2M to create the linkages between the two programs.
- c. NPRB would evaluate such proposals on the basis of the strength of the linkage between the two programs created with the additional funds, and have provisions and schedules of how data will flow between programs.

- d. If what is funded under BSIERP and NSF have a irreconcilable mismatch (geography, species compatibility etc.) then the \$2M holdback could be used to either supplement weak components in the BSIERP or go into the regular non-IERP part of next year's RFP.
- e. NPRB also would support common sessions at annual Alaska Marine Science Symposia to facilitate more communication and data exchange between the NPRB and NSF teams.

2007 RFP Part 1 – Bering Sea and Aleutians Integrated Ecosystem Research Program

The Science Panel reviewed the BSIERP component of the draft 2007 RFP, making the following observations:

1. *Education and Outreach:* The Panel suggested not requesting proponents to include a budget for E&O, but rather take \$60K off the top and use a professional to develop products and programs throughout the course of the project.
2. *Ship Time:* Discussion centered around putting dollars aside for ship time or having proponents make it part of the their budget. The Panel chose the latter, indicating that how observations platforms are to be funded should be explicitly stated in the pre- and full proposals.
3. *Vertical Integration:* There was a lot of discussion on the definition of vertical integration and the need to clarify this in the document. As a result the discussion also focused on the central question. A sub-group was formed to draft a definition and re-state the intent of the vertical integration in terms of the inclusion of at least one fish species of commercial/subsistence use. Wording was also changed to reflect a system approach rather than a single species focus at the upper trophic levels.
4. *Management Scenarios:* Reflecting similar discussion that occurred during the Science Team meeting, the Panel discussed in depth what was meant by human-induced scenarios. Many felt that it inferred management scenarios for fisheries, seabirds or mammals, but that if that were not qualified somehow, science would be stepping into the realm of policy-making. This made some member nervous even though it was pointed out that the BSIERP was requesting managers to be part of the PI team, and that to inform the scientific process with viable scenarios would be their job. In the end, the consensus was to reword the appropriate section to clarify that one of the goals of the BSIERP should be to develop the necessary tools to help explore management implications, have room for the effects of human-induced mortality, but that those investigations may occur by the management agencies themselves as a future step.
5. *LTK:* The need of having LTK in the BSIERP was discussed, as was the apportionment of some percentage of the total budget to this issue. The Panel decided to strongly encourage LTK involvement if the subject matter of the proposal was appropriate to it. But the Panel envisioned that there could be some very outstanding proposal in which LTK would not applicable, and therefore abstained from recommending a forced inclusion. The issue whether to require a certain amount of the budget to go to LTK if appropriate was deferred to the Board. The intention of the Science Team regarding LTK, and as it stands now in the BSIERP, is to encourage it if appropriate and see whether or not it is a real effort or a token component. If an appropriate LTK component can be identified, but is not developed properly in the proposal, it would be the intent to include such a targeted need in the following regular RFP.

The Science Panel's recommended changes to the BSIERP component of the 2007 RFP are indicated as such in the draft RFP which will be distributed to the Advisory Panel and Board.

2007 RFP Part 2 – Non-BSIERP RFP

The Science Panel discussed all sections of the draft RFP presented by staff. Changes were made to sections as appropriate during these discussions and have resulted in the current draft RFP and associated funding targets provided to the Advisory Panel and Board for their consideration. The Panel is recommending a non-IERP RFP overall funding level of \$3.045-3.345M, depending on whether the Board decides to include the Graduate Fellowship Program. When the directed funding recommendations discussed below are added in, the total amount of new research funded outside the BSIERP would be \$3.365-3.665M as shown in the attached table. The Panel stated their strong position that unlike last year, any proposal to a particular category that exceeds that category's funding cap, should be returned unprocessed.

The following issues were raised on other specific topics:

1. *Indicators*: Before choosing a set of indicators for ecosystem management, there needs to be an effort to determine operational objectives. The development of these needs to occur in conjunction with managers and policy makers. Once this has been completed then the proper indicators to match to those objectives can be chosen (see workshop report for project 502 for details). In the meantime, the AFSC has hired a post-doc to conduct multivariate analysis on indicators currently available in the SAFE-ecosystem chapter. An effort also has started for the Fishery Ecosystem Plan for the AI, a process in which operational objectives should be defined. Based on these points the Science Panel recommends waiting until the 2008 RFP to pursue the issue of ecosystem indicators.
2. *Synthesis of NPRB Projects to Date*: Staff had proposed to put language in the RFP requesting a synthesis of NPRB projects completed to date, so that knowledge gathered could be put in a larger context, the contribution of NPRB to the different science fields could be evaluated, and the IERP could be informed by these efforts in a more comprehensive manner. The Panel pointed out, however, that in order to focus the synthesis in a useful manner, the projects should be grouped by question or ecosystem components, and then some critical mass of projects should be available before carrying out a synthesis. The Panel therefore asked staff to analyze the projects in such a context and report back to them with a schedule at the spring 2007 meeting as to when different groups may be ready for such an effort.
3. *Graduate Student Fellowship*: The Science Panel was very supportive of having a GSF program, but wanted to make sure it occurs at an appropriate level, and also that all the money for the full duration of any particular fellowship is put aside right away, rather than being subject to a future budgeting decision. However, when put to the task of balancing the budget for \$3M in the RFP, the Panel made the \$300k for this program optional and left the decision up to the Board dependent on how far above \$3M they wanted to go. They also requested staff to investigate how many graduate students NPRB has been supporting with their projects thus far.
4. *Directed Funding for 2007*. The Panel reviewed several items that have received directed funding in the past without going through the competitive process: (1) \$200k for mooring buoys M2-M8, (2) \$400k+ for monitoring the GAK line south of Seward, and (3) \$100k for continuous plankton recording across the North Pacific. The Panel recommends continuing the \$200k for M2-M8 because of their importance to monitoring change in the Bering Sea, but that only \$100k be identified for the GAK line to service the mooring. Additional plankton work along the GAK line would come into the 2007 RFP, as would any further continuous plankton recorder work. The Panel also recommended setting aside \$20k for a potential contaminants panel at the Alaska Marine Science Symposium in January 2007 to help focus the Board's program on contaminants.

4. Gulf of Alaska Integrated Ecosystem Research Program

Carl Schoch presented a status report on the GOAIERP, which included a list of seven issue areas identified by the planning team: regime shift, large whales, depressed herring stocks, endangered beluga whales, depressed crab stocks, the paradox of a productive downwelling system, and marine protected areas.

There were no strong objections to any of the seven issues identified by the planning team, but the Panel thought that the “paradox of a productive downwelling system” should be ranked of highest interest and could perhaps also capture many of the other fishery-related issues. For example, the implications of climate forcing on primary productivity and the transfer of energy up the food chain to fished populations may include studies that address the effects of recovering large whale populations, the studies of crab and herring stocks and why they remain depressed in some areas, and studies on the effects of regime shifts. In addition, there was a suggestion to add the issue of the ecological effects caused by increased numbers of hatchery salmon produced from Japan.

The Panel will be receiving a more comprehensive report on GOAIERP planning and issues areas next spring.

5. Other Matters

The two-year terms for four Panel members (Rich Marasco, Shannon Atkinson, Dick Beamish, and Doug Woodby) expire at the end of September 2006. Drs. Marasco, Beamish, and Woodby indicated they were willing to serve another 2-year term if reappointed.

The Science Panel will meet next on November 28-29, 2006 in Seattle to review pre-proposals and then again on April 10-13, 2007 at the Alaska SeaLife Center.