CALL FOR PRE-PROPOSALS FOR:
The Gulf of Alaska Integrated Ecosystem Research Program

Introduction

The North Pacific Research Board is launching its second Integrated Ecosystem Research Program (IERP), this one with the focus in the Gulf of Alaska (GOA). The Implementation plan for this IERP (http://www.nprb.org/science/goa_ierp.html) should be consulted carefully before applying to this Request for Pre-Proposals.

In summary, the Gulf of Alaska Integrated Ecosystem Research Program revolves around the following overarching question:

How do environmental and anthropogenic processes, including climate change, affect various trophic levels and dynamical linkages among trophic levels, with particular emphasis on fish and fisheries, marine mammals and seabirds within the Gulf of Alaska?

In the first instance, the goal is to ***determine and quantify the processes driving upper trophic level populations and to better understand observed and potential future variability therein as they affect key management issues in the North Pacific.*** To do so comprehensively, monitoring, modeling, retrospective analysis and process studies will need to be integrated. A comparative study, designed to investigate demographic differences at a regional geographic scale, might best elucidate critical control mechanisms for population dynamics of upper trophic level species (see GOA IERP Implementation Plan for details and other directions).

The overall GOA IERP spans from climate/physics through fish, birds, and mammals and has been divided into four components which will be competed separately and integrated in a post proposal selection process to ensure that a fully vertical trophic understanding is obtained. The first component will focus on one or more upper trophic level species, at least one of which must be a fish species of commercial importance. This component should investigate the processes and mechanisms that regulate the productivity and population trends, including their variability, of the top level species of interest. The second component will focus on the forage base which influences the productivity of the top level predator(s) chosen. The type, quality and quantity of food resources and their timing and location, are critical to understanding higher trophic level responses. Thus, the ecological breadth and scope of the second component are expected to be somewhat larger than that of other components. The third component will focus on the lower trophic level, including the biological and physical oceanographic parameters on which this portion of the ecosystem is based. Finally, the fourth component, a strong vertically-integrated modeling effort, will be essential to describe and predict the response (and variability therein) of the portion of the GOA ecosystem to be studied, to environmental and anthropogenic processes, including climate change.

This is a call for pre-proposals for the first component: **Upper Trophic Level ONLY**. Full proposals for middle and lower trophic level components as well as an integrated modeling component will be requested after invitations for full proposals for the upper trophic level component have been issued in March 2009 (see GOA IERP Implementation Plan for details).

Funding

A total of eight million dollars (including overall data and program management, as well as education and outreach) may be made available for this GOA IERP starting in fall 2009 and ending in 2013 or 2014 (see detailed timeline below). The NPRB is reserving $500K for overall IERP program management as well

as $200K for IERP Education and Outreach. It is anticipated that the remaining funds ($7.3M) will be distributed between the four integrated components approximately as follows: i) Upper Trophic Level Component: $2.8 million, ii) Forage base Component: $2 million, iii) Lower Trophic Level and Physical Oceanography: $1.5 million and iv) Ecosystem Modeling Component: $1 million.

Upper-trophic level pre-proposals must include a planning year (fall 2009 through 2010, not to exceed $125,000), two or three major field years (2011, 2012 and potentially 2013), not to exceed $1,025,000 each year, and one or two analysis and synthesis year(s). Applicants must demonstrate that their objectives and products (e.g., data collection/analyses, final report, publications, climate and human induced change scenarios, information for resource managers) are attainable with the requested funds and within the requested award period, and that the project has a clear management application.

Staying within these financial boundaries set by NPRB will require the successful IERP proposals to demonstrate thorough understanding and maximum leveraging of existing observational and modeling programs (see GOA IERP Implementation Plan for details). Such a leveraged program will employ the major research activities (monitoring, process studies, retrospective analysis, and modeling) to the extent they are necessary to elucidate relevant patterns and trends, and their associated causal processes and mechanisms. ***The critical aspect is vertical integration.*** Given the focus on quantitative predictions, continuous communication between field work results and modeling will play a crucial role. The exact structure of the award will depend upon the decision of the NPRB on exact funding amount, review by NPRB, review by Department of Commerce officials, and the results of post-selection negotiations between the program and NPRB staff.

Pre-Proposal Elements

As stated above, the first component requested here will focus on one or more upper trophic level species, at least one of which must be a fish species of commercial importance. This component should investigate the processes and mechanisms that regulate the productivity and population trends of the top level species of interest and their variability.

Pre-proposals are limited to five pages (**excluding** figures, tables and budget, literature cited, and PI descriptions, all of which should follow the 5 pages of project description) and must have the following elements:

1. ***Overview (approximately 2 pages):***

    a. Describe how the proposed research will significantly enhance the understanding of each of the following:
        (1) the major ecosystem processes that regulate the distribution and abundance of the specific upper trophic level species chosen as part of this proposal
        (2) quantitative changes of these processes under various environmental and anthropogenic forcing scenarios;
        (3) direct and indirect human-induced impacts on the specified species.

    b. Describe the elements and processes to be studied:
        (1) Specifically, justify the study species chosen and the parameters and measurements that will form the basis for the study. Justify why these are the essential components to address your objectives.
        (2) Indicate and justify the geographic region(s) within the GOA that will be the focus of the proposed study. Clearly state the spatial and temporal scales to be investigated.

(3) Indicate and justify how many field years (2 or 3) are planned for the proposed study within the funding limitations described below (Section 4: Budget). Describe the implications of the number of field seasons chosen on the study outcome.
(4) Indicate and justify the relevance of the proposed study to fisheries management.

c. Describe the middle and lower trophic level data and models (i.e., species, parameters and measurements, etc.) needed from the separately competed components that would be critical to a successful vertically integrated ecosystem study. It is expected that up to $4.5 million dollars will be available to complete the middle trophic level, lower trophic level and modeling components. Thus, the description of data and models needed from the other components should be both relevant to the vertical integration as well as feasible given the planned budget.

d. Describe the deliverables of your project and how they will benefit management of commercial and/or subsistence species. Applicants must demonstrate that their objectives and products (e.g., data collection/analyses, final report, publications, climate and human induced change scenarios, information for resource managers) are attainable with the requested funds and within the requested award period, and that the project has a clear management application.

2. Approach (approximately 2 pages)

In developing and quantifying mechanistic processes and predictions, describe the research approaches (process studies, retrospective analysis, monitoring and modeling) to be employed for each element and/or quantifiable process identified above. Clearly indicate how your study would link to mid and lower trophic level studies, as well as modeling. Describe how your proposed project will build or link to other past or on-going projects, and if applicable, specifically list long-term monitoring projects.

3. Project Management (approximately 1 page)

a. Identify the lead PI as well as all other PIs involved in the proposal.

b. Describe, as appropriate, how the program will collaborate, coordinate, supplement and/or be leveraged with current programs of the NPRB and/or other organizations or communities.

c. If applicable, you must identify the research platforms (e.g. ships) to be used and indicate how they will be funded (NPRB or other). Be as specific as possible.

d. Data management for the entire vertically integrated module is to be included as part of the upper trophic level component. As best you can, describe the overall data management strategy for the fully-integrated vertical ecosystem program that will be in place once all components (upper, middle, and lower trophic levels, and modeling) of the program have been selected.

4. Budget

The budget for this pre-proposal focused on the upper trophic level component should not exceed $2.8 million over 4-5 fiscal years (starting in October 2009 (FY 2010) and ending in FY 2013 or 2014). Budgets must be allocated by federal fiscal years (Oct 1- Sep 30) and organizations requesting funds.

Budget must include:

- A planning year: October 2009 through Sep 2010 (FY 2010), not to exceed $125,000. Applicants should include the costs for all PIs to attend at least two PI focal/coordination meetings in Anchorage (likely in fall 2009 and spring 2010).
- Two or three major field years (FY 2011, 2012 and potentially 2013), where each year cannot exceed $1,025,000.
- One to two analysis and synthesis years (FY 2013 and/or 2014).
- Ship time must be specifically detailed (year, amount, funding source – NPRB or matching).
- Budgets must include annual travel for all PIs to a special PI meeting in Anchorage and for all lead PIs to the Alaska Marine Science Symposium (takes place each January in Anchorage) during each year of the study.
- Anticipated other support and cost leveraging per year and organization.

5. PI descriptions

Provide a one-page curriculum vitae (including current activities and publications relevant to the proposed work) for the lead PI and each of the other PIs involved in the proposal.

Pre-Proposal Submission

Pre-Proposals must be submitted electronically by email to Carrie Eischens (carrie.eischens@nprb.org) by **4 p.m. Alaska time, January 28, 2009**. Pre-proposal documents attached to the submission email must include:

- one Word (version 2003 or earlier) file that constitutes the 5-page pre-proposal plus associated figures, tables, literature cited, budget, and
- one Word (version 2003 or earlier) or PDF file that includes all the one-page PI description(s) (see 5 above).

A cover letter in the form of an attachment that accompanies the 2 proposal submission documents above is optional. Text within the email submission itself will not be reviewed.

All pages within the submitted documents must have **1-inch margins** at the top, bottom and sides. The font and size must be **Times New Roman 11 point**. No page in the pre-proposal and supporting material may be formatted to any size other than 8.5x11 inches. Pre-proposal elements 1 through 3 **must have continuous line numbers** to facilitate review.[1] **Failure to comply with any of these specifications will result in automatic dismissal of your pre-proposal.**

1 In Microsoft Word, on the **File** menu, click **Page Setup**, and then click **Layout** tab. In **Preview**, apply to **Whole Document**. Click **Line Numbers**, and then select the **Add Line Numbering** check box. In the **From text** box, must be **Auto**. In **Numbering**, click **Continuous**.

Final submission must occur **by 4 p.m. Alaska time, 28 January 2009.** All applicants who have successfully submitted a pre-proposal by the deadline will receive a confirmation email.
Questions should be directed to Carrie Eischens (carrie.eischens@nprb.org; 907-644-6712).

Pre-Proposal Review

The NPRB Staff and Science Panel will review pre-proposals and develop recommendations for the Board. Evaluations will be based upon the required proposal elements identified above.

Invitations for Full Proposals

Based on the Board's decision, invitations for full proposals will issued by **6 March 2009**. The Board may choose to not invite any full proposals if it concludes that no pre-proposal is sufficiently responsive to the RFP. Pre-proposal documents (without salary information) of selected upper trophic level proposals will be made publically available on the NPRB website to facilitate coordination with the other components of the fully integrated ecosystem study.

At the time of full proposal invitation for the upper trophic level components, a Request for Full Proposals for the middle and lower trophic levels and modeling components will be released. Specific full proposal requirements will be issued at that time. Full proposals will likely be due by 2 July 2009.

Program Integration

Full vertical integration across all trophic linkages will be achieved via focal meetings *after* the full proposal selection of all components in September of 2009. It will be the aim of the fall 2009 and spring 2010 post-selection meetings to establish vertical linkages and build cooperation between components. A scientific leadership group made up of the four lead PIs (upper, middle, lower trophic levels plus modeling components), in coordination with NPRB staff, Science Panel, Ecosystem Modeling Committee, and Advisory Board, will be established and be responsible for overall project management and integration.

Timeline Summary Table

Scheduled Item	**Tentative Timeline**
Call for Pre-proposals for upper trophic level component	October 3, 2008
Pre-proposal Submission Deadline	January 28, 2009
Science Panel meeting	February 11-12, 2009
NPRB meeting	February 24-25, 2009
Invitation for Full Proposals for upper trophic level component	March 6, 2009
RFP Release for full proposals for all other components	March 6, 2009
Full proposal Submission Deadline (all components)	July 2, 2009
NPRB Funding Decisions	September 2009
Notification to PIs	October 2009