

Fiscal Year 2000 National Oceanographic Partnership Program BAA

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Solicitation Number: BAA 99-027

Due Date: SEE THE ANNOUNCEMENT

Classification: A

Type: Procurement

Agency:

Office of Naval Research
800 North Quincy Street
Arlington, VA 22217-5660

Title: National Oceanographic Partnership Program

Point of Contact: Brian Glance Code 252 (703) 696-2596

GLANCEB@ONR.NAVY.MIL

Synopsis:

On behalf of the National Oceanographic Partnership Program (NOPP) the Office of Naval Research (ONR) solicits proposals addressing a variety of Partnership Programs as outlined in Title II, subtitle E, of Public Law 104-201 of September, 1997, the National Oceanographic Partnership Program.

Up to \$14.5M may be available for this announcement subject to appropriation and final approval by the National Ocean Research Leadership Council. Proposals are due December 14, 1999 and on February 29, 2000 depending on the Topic as indicated below. Team efforts among academia, industry, and government participants with cost sharing proposals augmenting ongoing joint efforts are very strongly encouraged. Additional solicitation(s) for NOPP research may be published in the June/July 2000 timeframe.

Proposals are sought in major Topic areas described below with additional information at <http://www.onr.navy.mil/oas> under "Additional Points of Interest" or at <http://www.nopp.org>. These websites should be checked for the most recent information.

Topic A - TOWARD AN INTEGRATED OCEAN OBSERVING AND PREDICTION SYSTEM (IOO&PS)

Background: The Partnership Program has initiated several efforts toward a community-wide, linked 'system' of resources, collaborations, and elements for ocean observing and predicting activities. The genesis for this initiative was a series of workshops in 1997 (Nowlin) and 1998 (Powell) illuminating the need for an Ocean

Research Synthesis and Modeling Program (ORSMP) which garnered further impetus and definition with the publication of the NOPP report "Toward a U.S. Plan for an Integrated, Sustained Ocean Observing System" in April 1999. These reports are available at the NOPP websites. NOPP selected a few initial efforts in 1999 to address and develop this approach in a phased manner by focusing of modeling and data assimilation capabilities in various ocean science sub-disciplines via a 'hub-node' format (the referenced NOPP websites have details regarding the 'hub-node' concept). Proposals under Topic A are due by Tuesday, December 14, 1999.

The challenges for researchers in this topic area are two-fold. First is to develop the partnerships and rationale for a scientific study and products of wide community interest. Second is to develop concepts that maximize flexibility and utility of a hub-node system for the future. The goal is to simultaneously produce scientific results in challenging areas and develop new infrastructure. The scientific problems to be addressed by this structure will evolve and will be of such a nature to warrant resources invested in a 'hub' that are normally unavailable to a single investigator. By providing the appropriate infrastructure, this program will promote the development of community models and modeling capabilities, efficient and effective data assimilation and data management systems, improved access to a wider variety of data, and provide ongoing rationale for critical ocean observations. Participants in this topic are expected to establish strong collaborative interactions between existing and new teams. To foster collaboration, all investigators will be expected to participate in periodic workshops starting shortly after grant award to further define the necessary infrastructure issues. A major forum and community meeting is tentatively planned for the Winter AGU/ASLO meeting 24-28 January 2000 in San Antonio.

Specific elements sought at this time are:

(A1) Planning and implementation of a 'Virtual Ocean Data Hub' (VODHub) activity as a key element of the full community-based 'system' to broaden and improve access to ocean data described in the September 1997 NOPP Data Center Workshop Report available on the NOPP Websites. The key to success of the VODHub will be the ability of a user to easily access certain data types in specified locations/times, regardless of data source, and without special efforts or insights on the part of the user about the data source(s). Ideally, the data would readily transfer into the user application via developed or commercially available software/shareware. To achieve this, it will be critical to develop or establish community wide conventions for data access and to develop/promulgate the transaction software to do so. Effectively, this 'hub' will be a central "clearinghouse" for data holding locations throughout the ocean community and improve access to these data by developing effective community-based data conventions and means to 'serve out' or to 'pull down' data using existing or modified network services. It is envisioned that this research element will:

- identify individuals/organizations that will take the lead to foster development of community-based conventions for specific data types;
- partner with local institutions (public and private) to improve access to coastal and regional data via community-based conventions;
- enhance connections to existing national and international archives of ocean data as well as the program offices of major ocean programs (e.g. WOCE, JGOFS) via developed community based data conventions;

- partner with international groups to foster a world-wide "ocean data dictionary" to further commonality of access for all sources of ocean data; and
- work with national and international user standards groups (e.g., International Hydrographic Organization and their Electronic Navigation Charts) to foster access to ocean data via a growing number of user interfaces.

The Proposers should assemble a team to spend a year to initially plan these activities in connection with other 'hub-node' activities, and then develop implementation methods to accommodate system-wide connections to other key system elements (i.e., other 'hubs') and to other data access elements which may become attached to a particular 'Virtual Ocean Data Hub'. We anticipate support of one planning effort in this area at the \$500K level for the first year and expanding to \$1-2M per year in the outyears as the various elements and connections are defined and established.

(A2) Planning and implementation of a Pilot Project to broaden access to data from the Navy Sound Surveillance System (SOSUS) via a 'SOSUS Data Node' - 'SOSUSNode' - and the VODHub described above. SOSUS data have previously demonstrated potential for research and education purposes by researchers with security clearances working on other applications.

This Pilot Project should specifically address long-term costs and value of continued access to SOSUS data.

Essentially, 'SOSUSNode' would provide broader access for the community to propose the use of this data in applications of interest to NOPP and individual agencies. Detailed proposals for specific applications of SOSUS data are not sought at this time. Extensive ties to the larger potential user base must be evident in the proposal, preferably by partnering arrangements and/or research advisory functions. This should include one or more workshops with the potential user communities to assure the best access to useful data. The proposals for this 'SOSUSNode' activity should provide for connections to the emerging VODHub (see subtopic A1 above) and will require appropriate security clearances for personnel involved in the declassification process. The proposals should also provide for an option to renew for a three-year extension if the pilot proves successful. We anticipate support of one effort in this area up to the \$500K per year level initially, but decreasing to modest, nearly self-sustaining, levels as the process matures.

(A3) Implementation of several additional 'nodes' for data assimilation and modeling activities to focus on local application of global and basin-scale ocean data assimilation results. Under this subtopic, NOPP seeks appropriate partnership proposals to meet the challenge of applying global scale ocean nowcasts, high resolution models, and remote sensing data sets to solve practical ocean related problems inshore of the continental shelfbreak. It is envisioned that partnerships would be funded to develop specific ocean related information products that would significantly improve our ability to address a circulation, productivity, or pollution problem of the coastal ocean. The objective is to explore and develop the market for GODAE products (details may be found at <http://www.bom.gov.au/bmrc/mrlr/nrs/oopc/godae/homepage.html>) and to learn by example, what products, services, and data distribution mechanisms will enhance the utility of GODAE. Partnership proposals, which utilize broader scale

ocean state estimates (as are expected from GODAE) as boundary or initial conditions, will be favored. Partnerships proposals would also be favored if it can be shown that successfully developed products will continue to be produced operationally at the end of the NOPP development funding (which will coincide approximately with the start of the core of GODAE from 2003-2005). In this regard, NOPP particularly encourages development of partnerships with state and local government agencies, which may be able to ensure operational capability and support. NOPP expects to fund 3 - 5 proposals in this subtopic. Activities under this topic may extend over no more than three years and have budgets less than \$500K/yr.

Topic B - THE OCEAN BIOGEOGRAPHICAL INFORMATION SYSTEM (OBIS)

Background: The Census of Marine Life is a concept developed over the past few years with the support of the Alfred P. Sloan Foundation. In June 1999, a decision was made by the science ministers of 29 countries to establish a Global Biodiversity Information Facility (GBIF). The Sloan Foundation and NOPP wish to participate in the marine component of the GBIF by forming the Ocean Biogeographical Information System (OBIS). We envision that within a few years, one would be able to select any area or volume of water on a global map and bring up information as to what has been reported to live there. One aspect of importance to this overall effort is the need to develop a system that enables access by scientists and others to existing data on species distribution and abundance and into which data collected in the future can be placed. The working group report of the Organization for Economic Cooperation and Development (OECD), described in http://www.oecd.org/dsti/sti/s_t/ms/prod/gbif.htm, documents three major areas of impact:

- Coordination of new software development that link databases that embrace the full range of biodiversity information, including geographical, ecological, genetic, and molecular data;
- Digitization of all biodiversity information, usually embodied in specimens in collections far from where the samples were taken;
- Compilation of a definitive list of species, by name.

The Sloan Foundation and NOPP seek proposals that will capitalize on the GBIF, and create a design and protocol for OBIS that will allow a broad participatory process including those who obtain, manage, and/or use the data. Proposals for Topics B1 and B2 are due December 14, 1999.

(B1) Partnership proposals are sought for the development of the design of the Ocean Biogeographical Information System. These projects design, mindful of the GBIF framework, protocols for the OBIS. Partners on the proposal should include individuals who collect data, manage data, and use these data for a variety of purposes.

(B2) Partnership proposals are sought to begin to provide data to the OBIS. These projects should begin to develop portions of the OBIS by compiling databases and, eventually, digitizing them according to the protocols being developed in topic B1. Databases to be compiled and prepared for insertion in the OBIS should have the following characteristics:

- a. Coverage at global, basin, or regional scale;
- b. Uniform standards of species identification (this may require verification of all collected species identifications by a single authority);
- c. Detailed information on sampling methods as well as accurate longitude and latitude collection coordinates;
- d. Any other information required to meet metadata standards of the appropriate geospatial, biological and natural resource management communities.

Proposals in Topic B2 should comprise major efforts covering large geographical areas or multiple species inventories, preferably both.

Partners are encouraged to include the international community of taxonomic authorities who have species distribution data on major taxa or groups of major taxa from large coastal or deep-sea areas to produce fully characterized databases ready for archiving. Completed databases must be made generally available via the Internet. Strategies and efforts should seek long-term integration of biological data with other marine data and inclusion in the 'VODHub' effort described above under Topic A1, perhaps as an attached 'node' like the 'SOSUSNode' described above as Topic A2. Close cooperation with relevant government agencies is expected as well as with initiatives and programs such as 'Fishbase'. The efforts presented in the proposals should seek long-term integration of biological data with other marine data and should demonstrate an awareness of and familiarity with existing long-term observational programs in physical and chemical oceanography.

Proposals for Topics B1 or B2 must have an explicit component describing how their design will serve not only scientific research and marine management, but also address public education and outreach. NOPP envisions support of up to 8 efforts under Topics B1 and B2 for up to \$500,000 over a 2-year period.

TOPIC C - REGIONAL AND SPECIAL OCEAN OBSERVATION INITIATIVES

NOPP anticipates opportunities for ocean observation initiatives that may emerge late in the year from ongoing studies of an integrated ocean observing system as well as any initiatives described FY2000 Appropriation process. Examples include:

- development and operation of an ARGO float network;
- development of consortia for pilot regional observation "node" activities;
- further efforts on Census of Marine Life activities;

Proposals for Topic C or related efforts will be due on February 29, 2000 but submissions should not be made without checking the NOPP websites for the most recent information including availability of funds. **[As of 1/4/00, NO FORMAL PROPOSALS WILL BE SOUGHT UNDER TOPIC C.]**

TOPIC D - RENEWAL OF EXISTING NOPP PROJECTS

Currently funded 1997 NOPP partnership efforts (including educational efforts) can seek additional funding to "wrap-up" existing efforts and/or to begin transition to other efforts, where appropriate. We particularly encourage efforts that can converge to an Education/Outreach 'hub' serving the larger community as a single, seamless entity. A NSF-sponsored workshop is being planned to this end for early in 2000.

Review of these efforts will follow the guidelines outlined below, with the additional criterion of accomplishments achieved to date. Proposals must clearly state on their cover sheet that this proposal is a Renewal and indicate it is submitted under Topic D of this solicitation. Cost-share funding of up to \$300K per year will be available for 1-2 years for these purposes. This topic will remain open for one year but available funds for renewal proposals received after December 14, 1999 cannot be assured.

General Instructions and Information:

Interested offerors are encouraged to submit a notice of intent to propose for the December due date by November 30, 1999 to the address listed below. A short letter (1-2 pages) that gives the intended title with a description of the subject and a list of the potential partners (by name and affiliation) is sufficient. The purpose for this notice of intent is preparation of peer review activities; please provide data appropriate to determine subject matter experts without conflicts of interests. All proposals will be subject to peer scientific review, which will include non-governmental reviewers. All reviewers will adhere to confidentiality and conflict of interest standards. E-mail or fax submissions are strongly discouraged.

Twenty copies of the proposals are due not later than 4:00PM EST on Tuesday, December 14, 1999 or February 29, 2000 (depending on the Topic) to NOPP BAA/ONR 32, Room 407-8, Office of Naval Research, 800 N. Quincy Street, Arlington, VA 22217-5660. Proposals received at ONR after this date and time will not be considered except for Renewals under Topic D. All proposals must indicate BAA number above and which subtopic area is being addressed (e.g., Topic A1, A2, A3, B1, B2, C or D) on the cover page. Separate proposals must be submitted for each topic or subtopic area. Adobe Acrobat PDF or MS WORD files of the proposals are solicited, and should accompany the proposals on either a floppy diskette(s) or Iomega Zip disk. E-mail and facsimile materials are not acceptable.

Evaluations of the proposals will use the following selection criteria:

1. relevance of the proposed research to Partnership objectives, including
 - a. support of critical research objectives or operational goals such as data accessibility, education and communication,
 - b. broad participation within the oceanographic community,
 - c. partners with a long-term commitment to the proposed objectives,
 - d. resources are shared among partners, and
 - e. the degree of cost-sharing by partners with the requested Partnership funding,
2. overall scientific and technical merits of the proposal,
3. the offeror's capabilities, related experience, and facilities or unique combinations of these that are critical to the proposal objectives,
4. the qualifications and experience of the proposed principal investigator and key personnel,
5. degree of significant partnering among at least two of the following parties, academia, industry or government,
6. socio-economic merits of the proposal,
7. realism of proposed costs.

For awards made as contracts, the socio-economic merits of each proposal will be evaluated based on the extent of commitment in providing meaningful

subcontracting opportunities for small business, HUB zone small business, small disadvantaged business, woman-owned small business concerns, and historically black colleges and universities and minority institutions (HBCU/MI). The standard industrial classification code is 8731 with the small business size standard of 500. In addition, contract proposals that exceed \$500,000 submitted by all but small businesses, must be accompanied by a Small Business Subcontracting Plan in accordance with FAR 52.219-9. HBCU/MI's, as determined by the Secretary of Education to meet requirements of 34 CFR Section 608.2 and 10 U.S.C. Paragraph 2323(a)(1)(C), are particularly encouraged to participate, though no portion of this BAA has been set aside.

A synopsis of the NOPP Review Process can be found [here](#).

A component addressing education and/or public outreach is strongly encouraged for each proposed NOPP effort. The level and type(s) of effort are left to the proposers but linkages/collaborations with ongoing NOPP or other similar education/outreach efforts are particularly encouraged (see [NOPP Funded Projects in 1997](#)). Activities of this nature that are meritorious and require significant levels of support can request additional NOPP support (up to 10%) beyond the amounts listed in the Topic areas provided that they will be fully coordinated with NOPP Education and Outreach efforts. NOPP wishes to foster education and public outreach as an integral part of its research programs wherever feasible.

The final distribution of awards among topics will depend on quality of proposals and availability of funds as determined by the NOPP Council. Funding estimates for any ship-time must be specifically included in the proposal and the budget should clearly specify the size and type of vessels proposed for use. Ships of opportunity are encouraged. Proposers should include shiptime requests on either the former NSF Form 831 (Shiptime Request Form) or preferably the UNOLS on-line request form available at: <http://www.gso.uri.edu/unols/ship/shiptime.html> .

Additional Information is available on the World Wide Web at:
<http://www.onr.navy.mil/oas> under "Additional Points of Interest".

This notice constitutes a Broad Agency Announcement (BAA) as contemplated by FAR 6.102(d)(2). No request for proposal (RFP), solicitation, or other announcement of this opportunity will be made.

Questions regarding business and legal matters relating to this BAA should be directed to: Office of Naval Research, Attention Mr. Brian Glance (Code 252), Ballston Towers One, 800 N. Quincy St., Arlington, VA 22217-5660, (703) 696-2596. Technical questions may be submitted by E-mail to "NOPPBAA@ONR.NAVY.MIL" or by fax to "NOPP BAA" (703) 696-2007 if necessary.