

**NOAA's Undersea Research Program
HAWAI'I UNDERSEA RESEARCH LABORATORY
and
NOAA's Coral Reef Conservation Program**

**REQUEST FOR PRE-PROPOSALS
for
CY2004 and CY2005**

Coral Reef Ecosystems Research in Hawaii and other US Pacific waters

As one of six NURP Centers under the auspices of NOAA's Undersea Research Program (NURP) (www.nurp.noaa.gov), the Hawai'i Undersea Research Laboratory (HURL) (<http://www.soest.hawaii.edu/HURL/>) is presently soliciting research pre-proposals for coral reef ecosystem research for CY2004 and CY2005. Since HURL specializes in deep-water undersea research projects, **it encourages research proposals that rely on advanced diving practices (e.g., saturation, mixed gases, and rebreathers).** HURL and University of Hawai'i assets, including the R/V *Ka'imikai-o-Kanaloa* and the 900m remotely operated vehicle *RCV-150*, may be available to support operations in remote areas.

Regions of Interest:

- The waters of the Main and Northwest Hawaiian Islands, and the U.S. Territories and Freely-Associated States of the Western Pacific.
- American Flag Southwest Pacific waters, including American Samoa.

In late CY2004 and early CY2005, HURL intends to conduct a research cruise in the American Flag Southwest Pacific waters using HURL's assets including, R/V *Ka'imikai-o-Kanaloa* and the *RCV-150*. Proposals indicating interest in using the R/V *Ka'imikai-o-Kanaloa* as a scuba or advanced diving platform, as well as the *RCV-150* will be considered for inclusion in this research cruise. For more information on this opportunity, please contact Dr. Ed Myers (808) 956-6859, hurl@hawaii.edu.

NOAA Coral Reef Conservation Program (NCRCP) funds are for one to two year research projects that address the following priority research needs for the regions of interest: overfishing, pollution, invasive species, and coral bleaching, and the impact of these stressors on coral reef ecosystems. The evaluation of management effectiveness is also encouraged.

Funding of proposals is contingent upon HURL receiving adequate funds from NOAA. Multi-year funding will be awarded on an annual basis. Continuation of out-year funding will be contingent upon funding availability and the determination by the awarding agency that the selected proposal is on course to provide both interim and final products.

Proposals should clearly demonstrate how the scientific information, tools, or other products from the project would enable resource managers to address threats to reefs and advance conservation of coral reef ecosystems.

Specifically, this solicitation seeks proposals to:

- 1) Identify and evaluate factors critical to the health of coral reef ecosystems including: linkages among and within populations; fishing impacts (i.e. effects on predator-prey relations, competitive interactions, population genetics, and phase shifts); habitat requirements and utilization among different life stages of mobile fauna; water quality thresholds; distribution, abundance, impacts, species susceptibility, causative agents, and mechanisms of coral bleaching; ecological impacts of invasive species, susceptibility of communities to invasion, and risks associated with mariculture of non-natives).
- 2) Develop tools, such as models or analytical methodologies, to assist resource managers (e.g. assessing or predicting the impacts of climate change, coastal land-use impacts, recruitment/retention mechanisms, invasive species, and altered fishing patterns, or developing novel approaches for restoration or coral disease diagnosis).
- 3) Evaluate management approaches to prevent and reverse coral reef ecosystem degradation (e.g., effectiveness of restoration activities in recovering coral reef function, no-take reserves in increasing predatory fish biomass and abundance, and point and non-point source pollution management plans in reducing impacts to coral reef ecosystems).

PROPOSAL SUBMISSION

Pre-proposals are required.

Eligible applicants are U.S. institutions of higher education, not-for-profit institutions, and state, territory, and local governments. Proposals may include federal researchers as collaborators with a researcher who is affiliated with a U.S. institution, non-federal agency, or any other non-profit organization. Federal organizations may not charge federal salary, travel, or overhead, but other categories are appropriate.

NCRCF funds have a requirement of a 100% non-federal match. Non-federal matching funds may be comprised of a variety of public and private sources and may include in-kind contributions and other non-cash support. In accordance with 48 USC 1469a(d), this match requirement is waived for governments of Insular Areas (i.e., jurisdictions of Guam, American Samoa, and the Commonwealth of the Mariana Islands).

Proposal budgets for funded projects should range from \$50-70K for direct scientific support. All proposals must include necessary equipment costs (i.e., diving gear, boat rentals) in their budget. The 2004 day rate for the R/V *Ka'imikai-o-Kanaloa* with the 900m remotely operated vehicle *RCV-150*, is expected to be about \$19,000. This cost may be shared among several proposals for simultaneously scheduled work in a nominated area.

Pre-proposals (not more than 4 double-spaced typed pages) should reach HURL by August 4, 2003. They should contain a summary of the proposed research including: hypotheses to be tested; a brief description of the experiments and methods to be employed; any relevant time

constraints; the area of operations including latitude, longitude, and depth; and an estimate the level of support required, including equipment costs to conduct the proposed research. This will ensure that appropriate research guidelines are addressed, and will permit operations staff to evaluate feasibility.

Requests for final proposals will be issued on the basis of the pre-proposals. Final proposals should reach HURL by **September 8, 2003**.

Final Proposals must list specific persons proposed as divers, with resumes of their prior research diving experience, including experience with any advanced diving technologies that may be employed. This will enable the University of Hawai'i Diving Safety Officer to judge how much training and preparation would be required for the safe conduct of the proposed project.

If compressed gas or other advanced/technical diving (Advanced SCUBA, Rebreathers, Surface-supplied, etc.) is to be conducted to meet project goals, proposals **must include evidence** that such activities have been approved by, and will be conducted under the oversight of, a scientific diving program as defined by U.S. OSHA regulations (29 CFR Part 1910, Subpart T, Appendix B: Guidelines for Scientific Diving). The University of Hawai'i Diving Safety Program will review such documentation, as outlined below:

1. For University of Hawai'i/RCUH researchers: Inclusion of the form, "Application for Scientific Diving Research Proposal Approval," approved and signed by the University of Hawai'i Diving Safety Officer (form downloadable from: www.hawaii.edu/ehso/diving).
2. For researchers from NOAA, AAUS Organizational Member institutions, or other agencies/institutions with which University of Hawai'i holds reciprocal diving agreements: Inclusion of a letter from the institution/agency Diving Safety Officer, stating:
 - a. the proposal has been reviewed;
 - b. authors have approval to conduct the proposed diving operations under the
 - c. oversight of the agency or institution's scientific diving program; and
 - d. the institution/agency will accept oversight authority for the diving activity.
 - e. If advanced diving methods are proposed, the institutional manual provides guidelines for training of divers, and operation of the planned diving modes. A copy of this section of the manual should be attached.
3. For researchers from other institutions: Inclusion of all of the following:
 - a. A letter from the appropriate institutional supervisor (department head, section chief, etc.), stating:
 - (1) the proposal has been reviewed by the agency/institution's diving control board;
 - (2) authors have approval to conduct the proposed diving operations under the oversight of the agency or institution's scientific diving program; and
 - (3) the institution/agency will accept oversight authority for the diving activity.
 - b. A review copy of the institution/agency Diving Safety Manual, which shows that the institution administers compressed gas diving activities under a scientific diving program, as defined by U.S. OSHA (29 CFR Part 1910, Subpart T, Appendix B:

Guidelines for Scientific Diving). For comparison, the "Standards for Certification of Scientific Divers and Operation of Scientific Diving Programs" of the American Academy of Underwater Sciences will be used as the minimal acceptable standard. A copy of the AAUS Standards is available from: www.aaus.org. If advanced diving methods are proposed, the institutional manual must include guidelines for training of divers, and operation of the planned diving modes.

Each submitted final proposal will be sent out for peer review; after which a brief opportunity for rebuttal will be provided. Recommendations will then be sought from a HURL Science & Technical Review Panel, after which research projects will be selected on the basis of scientific merit, NOAA and NCRCP programmatic goals, contribution to research theme, and logistical considerations. Investigators will likely be notified of the outcomes of this process by **mid-December 2003**.

For projects involving the R/V *KOK* and *RCV-150*, HURL provides a data package for each RCV-150 dive. This package includes VHS copies of videotapes with a video log. HURL will archive the continuous video record and a highlights tape. Videotape excerpts will be provided upon request. The HURL Data Archive is the custodian of the original data, which remain the property of HURL. Databases of organisms and substrates observed on HURL dives are available for use by Principal Investigators. Use of dive data by other scientists is subject to principal investigator approval for 2 years from the date of each dive. HURL, NOAA-NURP and the NCRCP reserve the right to use video from any dive for program promotion.

Inquiries should be directed to Dr. Ed Myers (808) 956-6859, hurl@hawaii.edu.

The Hawai'i Undersea Research Laboratory looks forward to receiving research proposals from qualified scientists who are interested in participating in our research programs.

John Wiltshire
Acting Director, HURL

ADDRESS PROPOSALS TO:

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