

**Announcement of Request for Letters of Intent for
Cooperative Institute Research Funding Opportunity
NOAA National Ocean Service
National Centers for Coastal Ocean Science**

Funding Opportunity Title: Assessing the Benefits of Natural (Green) Infrastructure for Shoreline Stabilization: Ecosystem Service Valuation for Decision-making in Coastal Communities

Announcement Type: Initial

Dates: The deadline for receipt of Letters of Intent (LoI) at NCCOS/CSCOR is 11:59 PM Eastern Time April 08, 2015.

Funding Opportunity Description:

A. Program Objectives

The National Centers for Coastal Ocean Science (NCCOS) seeks to engage an interested and qualified Cooperative Institute (CI) to advance ecosystem service valuation research in the area of natural infrastructure approaches (i.e., protection or restoration of coastal habitats) to coastal shoreline management. Specifically, the CI supported under this Initiative would implement a project that would link and operationalize quantitative ecological and economic models in an applied fashion to:

- assess the efficacy of natural infrastructure projects in meeting target management goals (e.g., reduction in coastal inundation events, slowing the rate of shoreline erosion, etc.)
- assess the efficacy of natural infrastructure projects in providing additional, ancillary ecosystem service co-benefits (i.e., provision of essential fish habitat, carbon sequestration, increase in recreational opportunities, etc.); and
- estimate the direct and/or indirect economic value of natural approaches via short and/or long term ecosystem service improvements.

The selected CI will engage with NCCOS and other NOAA staff to develop a Statement of Work (SOW) for a project to demonstrate the benefit of using an integrated approach when valuating ecosystem services as well as the usefulness of the value estimates produced by successfully applying study findings in at least one case study. For the case study, the resulting project should work with a pre-identified client (e.g., a state resource management agency) that is also a partner in the research. To accomplish the objectives above, the project should leverage one or more planned or existing natural infrastructure projects. Topics of interest to be addressed by a project supported under this announcement include, but are not limited to, 1) nuisance flooding in low lying coastal communities and 2) regular coastal wave and storm erosion. Finally, NCCOS anticipates that this research will culminate with a model or models that can be applied at a multi-regional or national level.

B. Program Priorities

Preference will be given to a CI that can implement a project that would pursue the objectives of this Initiative in one or more of these three geographical regions: Northern Gulf of Mexico, Pacific West Coast, and the Chesapeake Bay. Preference will also be given to a CI that can demonstrate expertise in the evaluation of the benefits and tradeoffs of the use of green infrastructure in the development and implementation of resource management strategies that enhance coastal resiliency

C. Leveraging & Partnering Requirement

While NCCOS anticipates project deliverables that will be relevant to a multi-regional or national level, it is recognized that research, development and testing of ecosystem service valuation models in the area of natural infrastructure may be most effectively undertaken at a local or regional scale. Thus, the chosen CI is expected to ascertain the state of knowledge within the geographic region(s) of focus relating to the valuation of ecosystem services and natural infrastructure by engaging with:

- NOAA experts in coastal resource management, ecosystem service valuation, resilience indicators, and natural infrastructure research;
- academic programs/scientists that have developed heuristic and/or quantitative models related to ecosystem service valuation or natural infrastructure efficacy assessment that could be leveraged for the project; and
- federal, state and local agencies that are responsible for the management and restoration of coastal shoreline.

The CI will be expected to fully explore leveraging options, including ongoing or planned research, monitoring, and restoration or installation projects related to natural infrastructure and shoreline protection and stabilization. During the research process, the CI will be expected to directly and meaningfully collaborate with at least one management agency or organization that will directly and immediately benefit from project deliverables. Finally, the project implemented by the CI must deliver a valuation model or models that will ultimately have application at a multi-regional or national level.

D. Expected Products & Outcomes

The primary outcome for this research will be the identification, development, application and documentation of an analytical model(s) of ecosystem services provided by natural infrastructure that can be used to assess the value of investments in such management strategies. Envisioned products include:

- An analytical model or models that can be readily used by coastal resource managers or scientists in support of coastal managers at a regional, multi-regional and/or national level;
- final report to the partnering agency or organization summarizing study findings for the focal natural infrastructure project(s) application, as well as provision of a final dataset and metadata produced during the project for the partnering agency or organization;
- final report to NCCOS describing the model(s) developed, the analytical approach, instructions for running the model(s) and applying the approach in other settings (e.g., data requirements, code, etc.), case study findings, strengths and limitations of the approach, as well as provision of a final dataset and metadata produced during the project.

The desired products and deliverables from this investment are expected to advance the real-world application of ecosystem service valuation approaches in decision-making. The purpose is to provide decision-makers with the information they need to evaluate and choose among natural infrastructure alternatives for improving ecosystem and community resilience.

E. Funding Profile and Period of Performance

Starting in FY 2015, NCCOS anticipates to fund 1 project under this initiative for 1 – 3 years for up to \$400-\$450K per year. The period of performance and level of funding will be relative to the scope and scale of the project developed by the CI and NCCOS. The project will be implemented by the selected CI.

F. Letter of Intent and Implementation

In order to be considered for the implementation of this initiative, interested CIs must submit a Letter of Intent (LoI) by the deadline stated above. The LoIs will then be evaluated by a panel of subject matter experts selected from NCCOS, Office for Coastal Management, and other relevant NOAA Program Offices. Key criteria for evaluation will include level of available subject matter expertise and ability to implement the work at a multi-region or national scale. The panel will in turn make a recommendation to NCCOS as to which CI is best suited to carry out the intent of the initiative. Once a CI is selected, NCCOS will work with the appropriate staff at the CI to develop a Statement of Work describing the project to be implemented. Overall implementation of this initiative will be overseen by a NOAA team led by a NCCOS Program Manager and including one, or more, subject matter experts as appropriate. The NCCOS Program Manager will act as the primary point-of-contact for the CI with respect to implementation of the resulting project. The LoI shall not exceed 6 pages (min 12 point font size) and must address the requirements for leveraging and partnering as described above and reflect the CI's capability to implement the project. The LoI will consist of a title page and 5 pages of narrative .

The format for the LoI is as follows:

Title Page (one page)

- 1) CI Name
- 2) Lead for Development of Statement of Work (primary contact for this Initiative)
 - a) Title / Position
 - b) Affiliation
 - c) Telephone number
 - d) E-mail address
- 3) Additional SOW Team Members (any other CI staff or partner that will participate in the development of the SOW) - Name, affiliation, telephone, e-mail address, nature of contribution (i.e., expertise on a desired research field)

Narrative (not to exceed 5 pages)

The emphasis of the narrative of the LoI should be to demonstrate that the interested CI has the capability to implement a project focusing on Social Sciences and human dimension aspects of natural resource management. This capability must be demonstrated by a clear, but concise, description of CI assets with the expertise (internal or collaborative) to carry out the work described above, including examples of related past or ongoing projects. In particular, the expertise to evaluate the economic impacts (costs v. benefits) of the use of green infrastructure to manage and protect coastal resources. Please provide reference web links for the key assets listed (i.e., researchers CVs, project pages, etc.).

Letter of Intent should be emailed to Dr. Felix Martinez (Felix.Martinez@noaa.gov) by the deadline stated above. Questions on the LoI or other aspects of this Initiative should be sent to Dr. Martinez.

Implementation Timeline:

Apr 08 - Letters of Intent due to NCCOS

Apr 15 - CI selected and begin development of Statement of Work

May 01 - Statement of Work completed