ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

EXECUTIVE SUMMARY

Federal Agency Name(s): National Ocean Service (NOS), National Oceanic And Atmospheric Administration, Department of Commerce

Funding Opportunity Title: CSCOR FY09 NGOMEX and CRES

Announcement Type: Initial

Funding Opportunity Number: NOS-NCCOS-2009-2001466

Catalog of Federal Domestic Assistance (CFDA) Number: 11.478, Center for Sponsored Coastal Ocean Research - Coastal Ocean Program.

Dates: The deadline for receipt of proposals at the NCCOS/CSCOR office is 3 p.m., Eastern Time for both of the programs. For the Coral Reef Ecosystem Studies proposals are due October 9, 2008. For the Northern Gulf of Mexico proposals are due October 20, 2008.

Funding Opportunity Description: The purpose of this opportunity is to advise the public that NOAA/NOS/NCCOS/CSCOR is soliciting proposals for two separate programs. Program 1 is the Regional Ecosystem Prediction Program on Coral Reef Ecosystem Studies (CRES) From Science to Conservation: Linking Coral Reefs, Coastal Watersheds and their Human Communities in the Pacific Islands. Projects under this program will be 3 to 5 years in duration. The goal of this funding opportunity is to utilize existing scientific tools and approaches (e.g., biophysical models; coupled watershed and hydrodynamic models) within a social, cultural, and economic framework to develop and implement effective coastal ecosystem management practices in the Pacific Islands. Proposals should be regional in scale, interdisciplinary, comprehensive, integrated, and include multiple investigators to develop capabilities for innovative forecasts and predictions for improved management and control capabilities.

Program 2 is the Northern Gulf of Mexico Ecosystems and Hypoxia Assessment Program (NGOMEX). NGOMEX has two components. The Modeling the Causes of Hypoxia component takes a regional ecosystem prediction approach to advance model development assessing the association between the northern Gulf hypoxic zone and causative factors. The proposed research for this competition should be 3-5 years in duration. The Modeling the Impacts of Hypoxia component takes an ecosystem stressors approach to advance understanding of hypoxia on ecologically and commercially important living resource populations of the northern Gulf of Mexico ecosystem. These projects should be 3 to 5 years of duration. Funding is contingent upon the availability of Fiscal Year 2009 Federal appropriations. It is anticipated that final recommendations for funding under this announcement will be

made by February 2009 and that projects funded under this announcement will have a July 1, 2009 through August 1, 2009 start date. Background information about the NCCOS/CSCOR efforts can be found at www.cop.noaa.gov.

FULL ANNOUNCEMENT TEXT

I. Funding Opportunity Description

A. Program Objective

The Center for Sponsored Coastal Ocean Research (CSCOR), part of the National Centers for Coastal Ocean Science (NCCOS), develops and improves predictive capabilities for managing the Nation's use of its coastal resources through competitive research programs. NCCOS/CSCOR also supports efforts to translate the results of its research investments, and those of others, into accessible and useful information for coastal managers, planners, lawmakers, and the public to help balance the needs of economic growth with those of conserving the resources of our Nation's Great Lakes, estuaries, and coastal ocean.

NCCOS/CSCOR provides a focal point for regional ecosystem-scale multidisciplinary coastal ocean research within the National Oceanic and Atmospheric Administration_s (NOAA) National Centers for Coastal Ocean Science (NCCOS). Together with partners within NOAA and other organizations responsible for coastal resources, NCCOS/CSCOR advances the scientific understanding needed to protect coastal resources and ensure their viability for future generations. This increased understanding of the Great Lakes and coastal ocean directly benefits the management of U.S. coastal resources, and helps NOAA, other federal agencies, and state, tribal, and local governments achieve their coastal stewardship responsibilities.

A key objective of NCCOS/CSCOR research is the production of user-driven predictive tools that will enable resource managers to assess alternative management strategies to reverse degraded ecosystems and protect healthy ones. Research will be outcome-oriented towards predictions that have a demonstrable societal benefit, as well as increased scientific understanding that will provide managers and the public with sound scientific information for making decisions. Articulation of outcome-based management goals is required in proposals (see Section IV.B.), and recipients will be expected to report progress toward achieving outcome-based goals annually.

NCCOS/CSCOR uses a mix of issue-based (ecosystem stressors) and place-based (regional ecosystem research) approaches. The aim of the ecosystem stressor approach is to advance understanding of high impact natural and human-induced stressors on ecosystem structure and function including hypoxia, harmful algal blooms and climate change. The aim of the regional ecosystem research approach is to develop multidisciplinary regional ecosystem forecasting capabilities with an emphasis on transition to operation and/or application. Research priorities are currently determined through a multi-tiered process which includes Congressional direction, NOAA mandates and strategic plans, engagement of resource managers and stakeholders, and identification of strategic opportunities by the scientific community.

NCCOS/CSCOR Ecosystem Stressor-Based Research focuses on five key stressors where they are the primary causes of ecosystem changes that are of

management concern:

- climate change (e.g., ecosystem effects, sea level rise),
- extreme natural events (e.g., harmful algal blooms),
- pollution (e.g. hypoxia),
- invasive species, and
- land and resources use.

NCCOS/CSCOR stressor-based programs are undertaken with the understanding that coastal issues are complex, and that these stressors often interact with one another to varying degrees. Supported research seeks to understand the impacts of these stressors in an ecosystem context, including the human dimension of social and economic impacts. For these research programs to be effective at determining underlying causes and management options, they must often reach beyond the specific coastal system of concern to address important influences from adjacent watersheds, air sheds and global climate patterns.

NCCOS/CSCOR Regional Ecosystem Research is implemented on a geographic basis, with the regions being

- Great Lakes,
- Northeast,
- Mid-Atlantic,
- Southeast and Caribbean,
- Gulf of Mexico,
- California,
- Northwest,
- Alaska, and
- Western Pacific.

Different management issues predominate in each of these areas, although it is also the case that there are many similarities in the type of problems between regions and the science needed to address them. Because management regimes differ in these regions, user groups and stakeholders may be different in the different regions as well. NCCOS/CSCOR expects proposers to include representatives of management agencies and to work closely with user groups and stakeholders to define research projects and develop products that will apply to regional management needs.

Past regional ecosystem programs supported by NCCOS/CSCOR, such as the Ecological Forecasting (EcoFore) and the Cumulative Effects of Multiple Stressors (MultiStress) programs, solicited proposals from any U.S. region for any combination of issues and stressors. While this allowed the greatest flexibility for proposers, it did not take full advantage of the work that managers, scientists, agencies and lawmakers have done to identify and prioritize important science needs to provide a stronger basis for ecosystem approaches to management. NCCOS/CSCOR has merged these two programs into the Regional Ecosystem Prediction Program (REPP) that targets specific regions and issues and ties more explicitly to regional management needs to provide a stronger basis for ecosystem approaches to management.

In order to choose which geographic areas to focus on for FY2009, NCCOS/CSCOR considered the type and amount of research already supported in the region, the degree to which science issues and management needs were sufficiently articulated at this time, the maturity and composition of management efforts at a regional scale, and whether or not other funding agencies or regional entities were taking a lead in the region. NCCOS/CSCOR, as it has done with many programs in the past, actively seeks partners to help support critical regional ecosystem science needs given that these efforts often require substantial support over many years. It is recognized that all regions are important, and have unique issues. NCCOS/CSCOR and NCCOS have invested in many of these regional issues in the recent past (see www.cop.noaa.gov for examples of research supported by NCCOS/CSCOR _ projects are searchable by region). The intent of the Regional Ecosystem Prediction Program is to consider a limited number of regions and issues each year but, through annual announcements and multi-year awards, maintain a portfolio of regional research with a high degree of diversity, both geographically and of issues addressed. In some cases there may also be announcements for issues that span multiple regions.

A major planning and decision-making process within NOAA is the Planning, Programming, Budgeting, and Execution System (PPBES) which provides a mechanism for NOAA Line Offices, goal teams, and programs to undertake joint planning, allocate resources, and evaluate performance toward achieving NOAA and Congressional priorities. Within the PPBES structure, NOAA is divided into major matrix goal teams: ecosystem, climate; weather and water, commerce and transportation and mission support. Within the ecosystem goal team (EGT) is the ecosystem research program (ERP) which conducts applied research and development to provide the Ecosystem Goal Team and NOAA_s stakeholders scientific information and tools for implementing and evaluating ecosystem management. CSCOR/NCCOS which is part of the ecosystem research program within the ecosystem goal team provides the capability to leverage both internal and external scientific expertise through long-term, integrated, multidisciplinary efforts directed toward issues of importance to NOAA. Specifically, the topics solicited in this competitive request for proposals address the NOAA Ecosystem Goal Team objective to protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management and activities within the NOAA 5-year research plan focused on the following topics; assessments and forecasts of coastal and marine ecosystems, scenario development to support specific management actions and decisions; and capacity building and knowledge transfer for improved resource management. CSCOR research also addresses NCCOS Strategic Plan objectives to develop Ecological Forecasts and Integrated Ecosystem Assessments.

All CSCOR research programs adhere to the NOAA research strategy with respect to the transfer of research results to the management community. Projects selected for funding under CSCOR announcements are required to develop tools, such as ecological forecasting models and/or data syntheses for decision making, to assist resource managers in predicting ecosystem health as a result of certain ecological impacts (e.g. climate change, coastal land-use, invasive species, extreme events, contaminants, etc.). Such tools must have the capacity to predict ecosystem health

following alternative management actions, in order to assess and prioritize management strategies, as well as explore the social, cultural, and economic context in developing tools and evaluating factors critical to the success of reef management strategies.

During the implementation phase of research projects funded under this announcement, regardless of the funding mechanism used, CSCOR Program Managers will analyze financial statements and progress reports for each continuing multi-year project, and will have dialogue with the Principal Investigators and Authorized Representatives of the recipient institutions to discuss research progress and expected time lines for the remaining award period. Program Managers will consider the length of time remaining for each project, the amount of funds available, the tasks to be completed in the upcoming fiscal year, the pace of research, and any delayed progress relative to that originally proposed, before determining the amount of funds to allocate to continuing research projects in any given fiscal year.

As identified in all CSCOR competitive announcements, funding for ongoing multi-year research awards is contingent upon the availability of funds from Congress, satisfactory performance relative to proposal metrics and is at the sole discretion of the agency.

B. Program Priorities

Program 1 Coral Reef Ecosystem Studies _ From Science to Conservation: Linking Coral Reefs, Coastal Watersheds and their Human Communities in the Pacific Islands

Coral reefs and associated seagrass and mangrove ecosystems are among the most complex and diverse ecosystems on earth. They provide valuable services such as shoreline protection, maintenance of biodiversity, fisheries, tourism, recreation, and cultural and aesthetic value. These ecosystems have evolved to resist or recover from short term natural disturbances such as tropical storms and hurricanes as well as long term changes in climate that lead to fluctuations in sea level and ocean temperatures. However, as shallow, near-shore communities, coral reef ecosystems are ecologically linked to adjacent watersheds and are typically highly degraded by human activities. Anthropogenic stresses to coral reef ecosystems include poor water quality from runoff and inadequate sewage treatment, over-harvesting of reef resources and destructive fishing practices, sedimentation, shoreline development, and damage from tourists and divers. Human activities also exacerbate the impact of natural disturbances and restrict the ability of coral reef ecosystems to recover. Symptoms of stress include changes in reef community structure, mass bleaching (loss of symbiotic algae) of corals, regional reductions of certain reef framework corals, and disease-induced mass mortalities of reef-building corals and associated organisms.

According to the 2004 report by the Global Coral Reef Monitoring Network (http://www.gcrmn.org/), the world has lost an estimated 20 percent of coral reefs, 24

percent of the world_s reefs are under immanent risk of collapse though human pressures, and 26 percent are under a longer term threat of collapse. Significant further reductions in coral reef health, accompanied by major losses in biodiversity, are expected to continue for the next few decades unless coordinated action to manage and conserve these ecosystems is undertaken soon.

The 1998 Executive Order on Coral Reef Protection (E.O. 13089) directs Federal agencies to map, research, monitor, manage, and restore coral reef ecosystems. In response to the Executive Order, a U.S. Coral Reef Task Force established interagency working groups to address six areas: (1) Coastal Uses, (2) Ecosystem Science and Conservation, (3) Mapping and Information Synthesis, (4) Water and Air Quality, (5) International Dimensions, and (6) Education and Outreach. Research funded by NCCOS/CSCOR through the Coral Reef Ecosystem Studies (CRES) Program has provided long term regional ecosystem research that addresses coral reef degradation and provides alternatives for effective management, one of the key components of the Task Force Action Plan.

Following the Executive Order, the U.S. Coral Reef Task Force National Action Plan to Conserve Coral Reefs indicated the need for research on coral reefs for management action, also as articulated in the Coral Reef Conservation Act of 2000.

The CRES Program was developed in response to the continued decline of U.S. coral reef ecosystems, and the need to define and understand causes and effects of reef degration on a regional scale. Two long-term CRES studies were initiated in Fiscal Year 2002, one on reefs of the U.S. Caribbean and the other on reefs in Mircronesia region. In 2006, the study in Micronesia (CRES/Micronesia) was the first CRES project to be completed. The CRES/Micronesia project performed ecological studies on coral reefs; studies the characteristics coastal water flow, residence time, and spatial extent of watershed discharge, and quatified the societal costs to island communities resulting from the degradation of watersheds and their related reefs. The ultimate goal was to test how reef restoration techniques coupled with established marine protected areas and land-based remediation would influence the recovery of impacted coral reefs.

More information on the CRES Program and the CRES/Micronesia can be found at: http://www.cop.noaa.gov/ecosystems/coralreefs/current/CRES_overview.html.

In this next phase of the CRES Program the objective is to transition the results of coral reef ecosystem research into an operational mode. The goal of this new CRES funding opportunity, From Science to Conservation (CRES/FSC), is to utilize existing scientific tools and approaches (e.g., biophysical models; coupled watershed and hydrodynamic models) within a social, cultural, and economic framework to develop and implement effective coastal ecosystem management practices in the Pacific Islands. Effective ecosystem management strategies should restore degraded reefs, protect relatively healthy reefs, and ultimately maintain the valuable ecosystem resources and services that reefs provide to society. This new program will be a NCCOS/CSCOR effort to collaborate with NOAA_s Coral Reef Conservation

Program (CRCP). The CRCP, authorized under the Coral Reef Conservation Act of 2000, works across NOAA to support effective management and sound science to preserve, sustain and restore valuable coral reef ecosystems.

This announcement will also fulfill research needs for the Micronesia region indentified in the _Status of the Coral Reefs of the World_ report such as:

1. Developing the capabilities of the regional resource agencies, institutions of higher education, and community-based organizations within Micronesia and American Samoa to deal with issues surrounding sustainable use of marine resources of cultural, economic and scientific value;
2. Fostering cooperation and collaboration among the local and federal resource agencies, research facilities, community-based organizations, educational institutions, and the private sector to assist in meeting their mandates, goals, and community needs; and,
3. Collecting, synthesizing and disseminating adequate and accurate information in support of sound policy development on marine resource use, addressing present needs as well as the concerns for future generations.

Finally, this announcement will also fulfill the research needs defined in the NOAA Coral Reef Ecosystem Research Plan (FY 2007-2007), namely by fulfilling the requirement that NOAA research :

1. Is transferred into operations by management authorities in a timely manner;
2. Develops tools to detect and describe ecosystem changes in relation to natural and anthropogenic disturbances.
3. Incorporates both natural, physical, and social science research to develop management actions that are compatible with the resources and their users.

The projects solicited under this announcement will facilitate effective regional coral reef ecosystem management by integrating information from scientific studies with community-based decision making and action. Projects should apply social science, communication, or other approaches as appropriate to foster scientifically-informed collaboration among key stakeholders such as scientists, resource managers, and resource-dependent communities. Stakeholder involvement is important at all stages of resource management, from defining problems and goals to identifying and implementing solutions. Accordingly, highest consideration will be given to projects involving teams that integrate natural scientists, appropriate social scientists or other human dimensions specialists, resource managers (territory, state, or Federal), and an appropriately broad spectrum of community representatives with governmental or non-governmental affiliations. Projects must also integrate relevant local and traditional knowledge, both ecological and socio-cultural, with watershed and coral reef science. In addition, NCCOS/CSCOR will prioritize projects that apply ecosystem-based predictive tools such as water quality models that predict impacts to reefs from watershed-based human activities and economic models that predict consequences to local economies from changes in reef condition.

To build on the success of the CRES/Micronesia program in the Pacific Islands region, CRES/FSC will prioritize projects focusing on Pacific coral reef ecosystems (excluding the Hawaiian Islands) subject to the jurisdiction or control of the United States. NCCOS/CSCOR will select the strongest and most balanced proposal that focuses on watersheds from two or more of the following jurisdictions of special interest: Guam, American Samoa, Commonwealth of the Northern Mariana Islands, Marshall Islands, Federated States of Micronesia, and Republic of Palau.

The specific area of study and ecological/human dimension issues addressed within the regions will be defined by the selected proposal. Consideration of human dimensions in ecosystem research is becoming a key aspect helping NCCOS achieve it mission. More information on this approach can be found at: http://coastalscience.noaa.gov/human/strategy/NCCOSHDPlan.pdf. If access to remote study sites where to require the use of research vessel, these requirements (ship type, time, and cost) should be identified separately within the proposal budget.

Each proposal must:

(i) Incorporate existing bio-physical information within a community-based decision making and action process that gives serious consideration to socio-cultural, political, and economic factors that influence the success of participatory approaches and management strategies. The community-based process must engage key stakeholders to establish the specific management goals that will be addressed by the proposal. Scientific information should then be used to evaluate and assess the dynamics of the targeted coral reef ecosystems and their related watersheds and identify the key stressors that are impacting or could potentially impact the provision of important ecosystem services. The process must incorporate human dimensions when developing the resulting ecosystem management strategies for more effective implementation.

(ii) Incorporate predictive tools and capabilities (i.e., ecological forecasting models, data syntheses for decision making, etc.) to assist resource managers in predicting ecosystem health as a result of ecological and anthropogenic impacts (e.g., climate change, coastal land-use, invasive species, extreme events, contaminants, etc.) and prioritize their management strategies. Where appropriate, new predictive tools and capabilities can be developed and implemented to achieve the goals and objectives of the proposal.

Priority will be given to funding a single comprehensive proposal that includes a set of subprojects led by individual Principal Investigators. This collaborative team of multi-institutional, multi-disciplinary researchers is led by a single Lead Principal Investigator. The proposed work should be implemented as a consortium of academic, governmental, and non-governmental organizations that links approaches and findings to address problems on a regional ecosystem scale. At least two of the Pacific island groups prioritized above should be included in the proposal. Priority will be given to proposals that incorporate and enhance the capacity of local research and resource

management communities in the region. In addition, priority will be given to applications that include partnerships with additional sources of funding in order to leverage the goals of the proposal.

Typically, NCCOS/CSCOR programs include several lead researchers along with a Management Team. For this competition, proposals should describe the formation of a Management Team. The Lead Principal Investigator shall serve as chair of the Management Team and act as the main point of contact with the CRES program manager. Management teams typically include three to four individuals from independent institutions that, as a group, provide strong leadership and solid partnerships that enable the program to be fully integrated, effectively implemented, and closely monitored to insure production of the expected outcomes. Management teams can include representatives from Federal agencies, universities, local governments, non-governmental organizations, and stakeholder groups.

Expected Products and Outcomes

The intended outcome of this program is the protection, restoration, and maintenance of valuable ecosystem services for society through regional collaborative decision making and action that brings together scientists, resource managers, and resource-dependent communities.

CRES/FSC Products shall include, but not be limited to:

(1) Socio-economic and bio-physical research data (to be archived in an appropriate national data center, such as the National Oceanographic Data Center), assessments, scientific publications, summary reports, and any other useful activities or products from studies conducted in the completion of the project that will provide resource managers and the public with timely information that is readily understandable.

(2) Predictive tools such as simulation models (including ecological forecasts) that helped managers make informed decisions when assessing alternative management strategies (e.g., watershed and coastal water quality models to assess changes in land inputs and impacts on reefs and related habitats).

(3) A set of clear management strategies that address specific issues that affect coral reef ecosystems both directly (i.e., resource exploitation, recreation activities, etc.) or indirectly (i.e., poor land use practices, point source pollution, etc.) that will lead to improved coral ecosystem health.

(4) Syntheses of the implemented management activities, including specific recommendations for management action, that could be applied to other regions through novel and/or traditional approaches, particularly with respect to use of integrated watershed management. These could be in the form of printed and audio/visual media that is appropriate to target audiences, such as academia, resource managers, policy makers, and the general public.

For further information, researchers should contact the Program Manager Felix

Martinez (Felix.Martinez@noaa.gov, 301-713-3338 x 153).

Program 2 Northern Gulf of Mexico Ecosystems and Hypoxia Assessment Program (NGOMEX)

Hypoxia is one of the many symptoms of eutrophication of coastal ecosystems. Sustained or recurring low oxygen conditions can lead to faunal mortalities, food web alterations, loss of habitat, and impacts to fisheries. The largest hypoxic zone in the United States, and the second largest for the world's coastal ocean, is in the northern Gulf of Mexico off Louisiana, Texas, and Mississippi. Retrospective analyses of sedimentary records and model hindcasts suggest that hypoxia in this region has intensified since the 1950s, and that large-scale hypoxia began in the 1970s. The areal extent of the hypoxic zone, monitored in mid-summer since 1985, averaged 6,900 km2 from 1985-1992, but has averaged 15,930 km2 since then, and in 2007, was estimated at 20,500 km2, the third largest on record. The intensification and expansion of Gulf hypoxia over recent decades have been related to increases in nitrate loading from the Mississippi River watershed.

This issue has become a focal point for considerable scientific and policy attention because of the hypoxic zone_s enormous size and implications for watershed management for more than 40% of the contiguous United States. The interagency Mississippi River/Gulf of Mexico Watershed Nutrient Task Force, as authorized through the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998, submitted to Congress and the President in January 2001 the Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico. The Action Plan calls for a voluntary and incentive-based management plan that is founded on science and lays out a strategy to reduce the size of the hypoxic zone. The Coastal Goal of the Action Plan calls for the hypoxic zone to be reduced to an annual average size of 5,000 km2 by 2015. As mandated by its adaptive management framework, the Action Plan has undergone an intensive Science Reassessment over the last 4 years. The updated 2008 Gulf Hypoxia Action Plan (GHAP), restates the Coastal Goal of reducing the 5_year running average size of the Gulf hypoxic zone to less than 5,000 km2, and recommends a dual nutrient strategy targeting reductions of 45% in both riverine total nitrogen and phosphorus flux. Validation of these estimates and evaluation of the effectiveness of management actions critically depend on the accuracy of models that assess and forecast the quantitative association between hypoxic zone properties and the biological, chemical, and physical processes that regulate hypoxia development, magnitude, and extent. Action 9 of the GHAP calls for improved predictive modeling capabilities:

Gulf Hypoxia Action Plan Action 9: Continue to reduce uncertainty about the relationship between nitrogen and phosphorus loads and the formation, extent, duration, and severity of the hypoxic zone, to best monitor progress toward, and inform adaptive management of the Coastal Goal.

The GHAP also reaffirmed the hypoxic zone_s deleterious impact on marine

resources, and cautioned about the possible occurrence of an ecological regime shift associated with the expansion of hypoxia. The GHAP acknowledged uncertainty about the indirect effects of hypoxia on the Gulf socioeconomic and natural resources. Action 5 of the GHAP calls for spatially-explicit multi-trophic ecosystem models to quantify the direct and indirect effects of hypoxia on ecologically and commercially important shrimp and fish populations, and economic models to improve resource assessments and to quantify the socioeconomic benefits of nutrient reduction achievements in the Mississippi/Atchafalaya River watershed:

Gulf Hypoxia Action Plan Action 5: Identify and, where possible, quantify the effects of the hypoxic zone on the economic, human and natural resources in the&Northern Gulf of Mexico, including the benefits of actions to reduce nitrogen and phosphorus and the costs of alternative management strategies.

To address the issue of hypoxia in the northern Gulf of Mexico, CSCOR is supporting multi_year, interdisciplinary research projects to inform management of the northern Gulf of Mexico ecosystem in the region affected by Mississippi/Atchafalaya River inputs with a focus on understanding the causes and effects of the hypoxic zone over the Louisiana-Texas-Mississippi continental shelf and the prediction of hypoxia_s future extent and impacts. The research program is directed towards the goal of developing a predictive capability for this ecosystem within an adaptive management framework that connects model predictions and management actions with continuous feedback for improvement in each category.

The NGOMEX solicits proposals to address the following areas of interest based on the recommendations emphasized in the 2008 GHAP:

1) Modeling the Causes of Hypoxia: Develop new models and/or improve existing models that will inform management of the northern Gulf of Mexico hypoxic zone by providing quantitative predictions of the spatial and temporal extent and severity of hypoxia over the Louisiana-Texas-Mississippi continental shelf given varying levels of nutrient inputs, physical forcing, and any other key anthropogenic or natural factors that control hypoxia.

2) Modeling the Impacts of Hypoxia: Develop quantitative models to predict the individual_ and population_level effects of different spatial and temporal extents of northern Gulf of Mexico hypoxia on ecologically and commercially important aquatic species and, where feasible, the socioeconomic consequences.

3) Overall Considerations:

I. Modeling the Causes of Hypoxia: The EPA SAB report, Hypoxia in the Northern Gulf of Mexico (web link in Electronic Access section below), recommends the use of a diverse ensemble of models for best informing management about hypoxic zone properties and their control. These can range from simple empirical models to

more complex 3-D models. As stated in the SAB report, _No one best approach to modeling can be identified, and management of Gulf hypoxia is best served by having multiple models with multiple outputs._ We are therefore seeking a project that will develop two or more models that encompass complementary approaches to assessing and forecasting the hypoxic zone.

Priority will be given to funding a single comprehensive proposal for up to five years that includes a set of subprojects led by individual Principal Investigators. This collaborative team of multi-institutional, multi-disciplinary researchers can be led by 1 or 2 Lead Principal Investigator(s). The project should include research that will ensure sufficient collection of observational and process-oriented data for model support, including spatial and temporal dynamics of the hypoxic zone and relevant environmental variables, and water column and benthic transformation processes influencing hypoxia. Adequate characterization of the maximum (mid-summer) extent of the hypoxic zone should be included to allow for robust model calibration and verification of the relationship between hypoxia and nutrient loads and other contributing factors, since this is the fundamental test of the model_s utility to support management decisions that will achieve the GHAP_s Coastal Goal. Data support for models can also include the following research needs to advance the science characterizing Gulf hypoxia and its causes, as cited by the EPA SAB report:
* collection and analysis of sediment core data to advance understanding of spatial and temporal trends in hypoxia;
* investigation of freshwater plume dispersal, vertical mixing processes, and stratification over the Louisiana-Texas continental shelf and Mississippi Sound;
* biogeochemical and transport processes affecting the load of biologically available nutrients and organic matter to the Gulf of Mexico; and
* elucidation of the role of P relative to N in regulating phytoplankton production in various zones and seasons, and investigation of the linkages between inshore primary productivity, offshore production, and the fate of carbon produced in each zone.

For this part of the NGOMEX competition (Modeling the Causes of Hypoxia), the formation of a Management Team chaired by the Lead Investigator (or co-chaired by 2 Lead Investigators) should be described. The Lead Principal Investigator(s) serves as a main point of contact with the NGOMEX program manager. The Management Team would be comprised of lead investigators from the partner institutions that, as a group, provide strong leadership and solid partnerships that enable the program to be effectively integrated, implemented and monitored to ensure production of the expected outcomes.

II. Modeling the Impacts of Hypoxia: Proposals should seek to quantify through predictive multidisciplinary ecosystem models the ecological and, if feasible, socioeconomic impacts of hypoxia, including an evaluation of the effects of alternative management strategies on ecosystem function and living resource populations. Models should evaluate the relationship between hypoxic zone properties (e.g. magnitude, timing, distribution) and the distribution, production, and health (e.g. growth potential, reproductive potential) of ecologically and commercially

important finfish and shellfish. Priority will be given to comprehensive ecological forecasts that address the long-term consequences of hypoxia to populations of commercially and recreationally valuable species such as shrimp or finfish, given a range of future scenarios for nutrient loading to the Gulf of Mexico and including the interactive effects of other important contributing factors such as coastal wetland loss, fishing pressure and climate change.

The following are research topics that were stated as science priority needs at the Ecological Impacts of Hypoxia on Living Resources Workshop in March 2007 and that may be important components of a comprehensive ecological forecast of commercially and recreationally important living resource populations:
* quantification of the interactive effect of hypoxia with other anthropogenic stressors, especially fishing, but also climate change, wetland loss, and contaminants;
* improved understanding of spatial and temporal movements of fauna, including zooplankton, in relation to the hypoxic zone;
* quantification of hypoxia-induced food web alterations, and the consequences on individual growth potential and reproductive fitness of important fish and shellfish species, and the repercussions for population size;
* hypoxia-induced alteration of spatial distribution of mobile organisms, including congregation along hypoxic edge;
* loss of optimal habitat due to hypoxia and/or blocking of migration pathways, and the consequences at the population level;
* hypoxia-related sub-lethal reduction in growth and reproductive capabilities in both vertebrates and invertebrates.

In addition, the Ecological Impacts of Hypoxia on Living Resources Workshop listed the following among its management priority needs:
* development of bioeconomic models to assess the socioeconomic impacts of quantified effects;
* determine the ecological resilience of coastal systems to hypoxia, and quantify the collapse threshold of these systems through modeling.

The latter need relates to the important issue of regime shifts due to hypoxia _ has one occurred in the northern Gulf of Mexico or can this be predicted? Is there a tipping point_ for irrecoverable fishery (e.g. shrimp) declines, and would management strategies to mitigate hypoxia buffer or prevent this?

For this part of the NGOMEX competition (Modeling the Impacts of Hypoxia), explicit identification of the end user group(s) (e.g. specific agencies and programs) and expected policy framework under which these results may be used, is required. Thus, proposals must include objectives that directly link scientific questions to management needs and are tractable within the time frame and budget proposed. To ensure continued interaction with, and attention to, the critical management issues, the project team must include at least one manager of the resource(s) being evaluated in the proposal. The proposal must demonstrate a commitment of the management agency to using the results of this research.

Proposals must clearly articulate how the research results will be provided within the time frame of the proposal and used by coastal managers to improve their ability to make informed decisions and assess alternative management strategies. Proposals must demonstrate the adequacy of data sources for calibration and verification of any models to be developed. Proposals must also demonstrate how the proposed study complements or builds on previous and ongoing work in the region. Proposals for studies whose results can be usefully extended to other regions are strongly encouraged.

The following web sites summarize CSCOR_s longstanding commitment to informing management of the hypoxic zone in the northern Gulf of Mexico, and provide information on legislative, policy, and management drivers to understand and mitigate hypoxic zone impacts:

A description of the role of CSCOR in research and management activities of the northern Gulf of Mexico hypoxic zone can be found at:
http://www.cop.noaa.gov/stressors/extremeevents/hab/features/hypoxia_report1206.html

A general description of the NGOMEX program, including past and present projects, is provided at:
http://www.cop.noaa.gov/stressors/pollution/current/gomex-factsheet.html;

The management driver for the NGOMEX program is the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force_s Gulf Hypoxia Action Plan 2008 for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico and Improving Water Quality in the Mississippi River Basin (2008 Gulf Hypoxia Action Plan). The web link for the document was not available at the time of publication for this FFO. The 2001 Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico is available at:
http://www.epa.gov/msbasin/planintro.html;

A recently released report from the EPA Science Advisory Board that evaluates the state of science and science needs in preparation for the 2008 Gulf Hypoxia Action Plan is found at:
http://yosemite.epa.gov/sab%5Csabproduct.nsf/C3D2F27094E03F90852573B800601D93/$File/EPA-SAB-08-003complete.unsigned.pdf;

The proceedings from a recently held Ecological Impacts of Hypoxia on Living Resources Workshop are available at:
http://www.ngi.msstate.edu/hypoxia/marchconference.html;

Information from an April 2006 symposium, Hypoxia in the Northern Gulf of Mexico: Assessing the State of the Science Symposium includes presentation handouts at http://www.tetratech-ffx.com/hypoxia_ngm/agenda.htm,

and four peer-reviewed proceedings papers published in Estuaries and Coasts: http://estuariesandcoasts.org/contents/ESTU2007_30_5.html;

Background information that describes the need and priorities for research related to Gulf of Mexico hypoxia is available in the report from the Monitoring, Modeling and Research (MMR) multi_agency workgroup of the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force, available at: http://toxics.usgs.gov/highlights/new_hypoxia.html;

The legislative directive that authorizes funding for NGOMEX is the Harmful Algal Bloom and Hypoxia Research and Control Act: http://www.cop.noaa.gov/stressors/extremeevents/hab/habhrca/;

University_National Oceanographic Laboratory System (UNOLS) Ship Time Request Form is available in electronic format at: http://www.gso.uri.edu/unols/ship/shiptime.html. UNOLS' vessel requirements are identified later in this document under Part IV: Application and Submission Information, section B(2)(g) of this document.

For further information the researcher should contact the Program Manager, Libby Jewett, (libby.jewett@noaa.gov, 301 713-3338 x 121).

C. Program Authority

For the Coral Reef Ecosystem Studies _ From Science to Conservation: Linking Coral Reefs, Coastal Watersheds and their Human Communities in the Pacific Islands program the program authority is 16 USC 6403, for the Northern Gulf of Mexico Ecosystems and Hypoxia Assessment Program the program authority is 33 USC 1442.

II. Award Information

A. Funding Availability

Funding is contingent upon availability of Federal appropriations. NOAA is committed to continual improvement of the grants process and accelerating the award of financial assistance to qualified recipients in accordance with the recommendations of the Business Process Re-engineering Team. In order to fulfill these responsibilities, this solicitation announces that award amounts will be determined by the proposals and available funds. Funds for the Coral Reef Ecosystem Studies From

Science to Conservation: Linking Coral Reefs, Coastal Watersheds and their Human Communities in the Pacific Islands will not to exceed $200,000 per project per year. 1) It is anticipated that only one project will be awarded for this program with project duration of 3 to 5 years. Funds for the Modeling and Causes of Hypoxia component of the Northern Gulf of Mexico Ecosystems and Hypoxia Assessment program will not exceed $1,000,000.00 per project per year. 2) It is anticipated that only one project will be awarded for this program component with project duration of 3 to 5 years. Funds for the Modeling the Impacts of Hypoxia component of the Northern Gulf of Mexico Ecosystems and Hypoxia Assessment program will be up to $500,000.00 per project per year. 3) It is anticipated that 3 to 5 projects will be awarded for this program component with project duration of 3 to 5 years.

Applicants are hereby given notice that funds have not yet been appropriated for this program. In no event will NOAA or the Department of Commerce be responsible for proposal preparation costs if this program fails to receive funding or is cancelled because of other agency priorities. There is no guarantee that sufficient funds will be available to make awards for all qualified projects. Publication of this notice does not obligate NOAA to award any specific project or to obligate any available funds. If one incurs any costs prior to receiving an award agreement signed by an authorized NOAA official, one would do so solely at one's own risk of these costs not being included under the award.
Publication of this notice does not obligate any agency to any specific award or to obligate any part of the entire amount of funds available. Recipients and subrecipients are subject to all Federal laws and agency policies, regulations and procedures applicable to Federal financial assistance awards.

B. Project/Award Period

Full proposals may cover a project/award period of up to 5 years, but shorter-term project proposals will also be welcomed. Multi-year awards may be funded incrementally on an annual basis, but once awarded those awards will not compete for funding in subsequent years. Each award requires a project description that can be easily divided into annual increments of meaningful work representing solid accomplishments.

The following is a description of multi-year awards for those applicants subsequently recommended for award. Multi-year awards are awards which have an award/project period of more than 12 months of activity. Multi-year awards are partially funded when the awards are approved, and are subsequently funded in increments. One of the purposes of multi-year awards is to reduce the administrative burden on both the applicant and the operating unit. For example, with proper planning, one application can suffice for the entire multi-year award period. Funding for each year_s activity is contingent upon the availability of funds from Congress, satisfactory performance, and is at the sole discretion of the agency. Multi-year funding is appropriate for projects to be funded for 3 to 5 years. Once approved, full applications are not required for the continuation out years.

C. Type of Funding Instrument

Funding instruments available are project grants and cooperative agreements.

(1) Research Project Grants: A research project grant is one in which substantial programmatic involvement by the Federal government is not anticipated by the recipient during the project period. Applicants for grants must demonstrate an ability to conduct the proposed research with minimal assistance, other than financial support, from the Federal government.

(2) Cooperative Agreements: A cooperative agreement implies that the Federal government will assist recipients in conducting the proposed research. The application should be presented in a manner that demonstrates the applicant's ability to address the research problem in a collaborative manner with the Federal government. A cooperative agreement is appropriate when substantial Federal government involvement is anticipated. This means that the recipient can expect substantial agency collaboration, participation, or intervention in project performance. Substantial involvement exists when: responsibility for the management, control, direction, or performance of the project is shared by the assisting agency and the recipient; or the assisting agency has the right to intervene (including interruption or modification) in the conduct or performance of project activities.

NOAA will review the applications in accordance with the evaluation criteria. Before issuing awards, NOAA will determine whether a grant or cooperative agreement is the appropriate instrument based upon the need for substantial NOAA involvement in the project. In an effort to maximize the use of limited resources, applications from non-Federal, non-NOAA Federal and NOAA Federal applicants will be competed against each other.

Research proposals selected for funding from non-Federal researchers will be funded through a project grant or cooperative agreement. Research proposals selected for funding from non-NOAA Federal applicants will be funded through an interagency transfer, provided legal authority exists for the Federal applicant to receive funds from another agency. PLEASE NOTE: Before non-NOAA Federal applicants may be funded, they must demonstrate that they have legal authority to receive funds from another Federal agency in excess of their appropriation. Because this announcement is not proposing to procure goods or services from the applicants, the Economy Act (31 U.S.C. section 1535) is not an appropriate basis. Support may be solely through NCCOS/CSCOR or partnered with other Federal offices and agencies.

III. Eligibility Information

A. Eligible Applicants

Eligible applicants are institutions of higher education, other non-profits, state, local, Indian Tribal Governments, commercial organizations and Federal agencies that possess the statutory authority to receive financial assistance.
Please note that:
(1) NCCOS/CSCOR will not fund any Federal Full Time Employee (FTE) salaries, but will fund travel, equipment, supplies, and contractual personnel costs associated with the proposed work.
(2) Researchers must be employees of an eligible entity listed above; and proposals must be submitted through that entity. Non-Federal researchers should comply with their institutional requirements for proposal submission.
(3) Non-NOAA Federal applicants will be required to submit certifications or documentation showing that they have specific legal authority to receive funds from the Department of Commerce (DOC) for this research.
(4) NCCOS/CSCOR will accept proposals that include foreign researchers as acollaborators with a research who has met the above stated eligibility requirements.
(5) Non-Federal researchers affiliated with NOAA-University Cooperative/Joint Institutes should comply with joint institutional requirements; they will be funded through grants either to their institutions or to joint institutes.

B. Cost Sharing or Matching Requirement

None

C. Other Criteria that Affect Eligibility

Each proposal must also include the twelve elements listed under Proposal Submission/Required Elements, (a)-(l) or it will be returned to sender without further consideration.

It is the applicant_s responsibility to obtain all necessary Federal, state and local government permits and approvals where necessary for the proposed work to be conducted. Applicants are expected to design their proposals so that they minimize the potential adverse impact on the environment. If applicable, documentation of requests or approvals of environmental permits must be received by the Program Officer prior to funding. Applications will be reviewed to ensure that they have sufficient environmental documentation to allow program staff to determine whether the proposal is categorically excluded from further National Environmental Policy Act (NEPA) analysis, or whether an Environmental Assessment is necessary in conformance with requirements of the NEPA. For those applications needing an Environmental Assessment, affected applicants will be informed after the peer review stage; and will be requested to assist in the preparation of a draft of the assessment (prior to award). Failure to apply for and/or obtain Federal, state, and local permits, approvals, letters of agreement, or failure to provide environmental analysis where

necessary (e.g. NEPA environmental assessment) will also delay the award of funds if a project is otherwise selected for funding.

IV. Application and Submission Information

A. Address to Request Application Package

Applications submitted in response to this announcement are strongly encouraged to be submitted through the Grants.gov web site. The full funding announcement for this program is available via the Grants.gov web site: http://www.grants.gov. This announcement will also be available at the NOAA web site: http://www.ofa.noaa.gov/%7Eamd/SOLINDEX.html or by contacting the program official identified below. You will be able to access, download and submit electronic grant applications for NOAA Programs in this announcement at http://www.grants.gov. The closing dates will be the same as for the paper submissions noted in this announcement. NOAA strongly recommends that you do not wait until the application deadline date to begin the application process through Grants.gov.

Applicants should contact the Program Manager for non-electronic submission instructions.

Facsimile transmissions and electronic mail submissions of full proposals will not be accepted.

B. Content and Form of Application

This document requests full proposals only. The provisions for proposal preparation provided here are mandatory. Proposals received after the published deadline (refer to DATES) or proposals that deviate from the prescribed format will be returned to the sender without further consideration. Information regarding this announcement and additional background information are available on the NCCOS/CSCOR home page.

1. Proposals

Refer to IV. Application and Submission Information for further application submission details.

2. Required Elements

For clarity in the submission of proposals, the following definitions are provided for applicant use: Funding and/or Budget Period - The period of time when Federal

funding is available for obligation by the recipient. The funding period must always be specified in multi-year awards, using fixed year funds. This term may also be used to mean _budget period_. A budget period is typically 12 months. Award and/or Project Period - The period established in the award document during which Federal sponsorship begins and ends. The term _award period_ is also referred to as project period in 15 CFR 14.2(cc).

Each proposal must include the following twelve elements or it will be returned to sender without further consideration. The Summary, Title page, Abstract, Project Description, References, Biographical Sketch, Current and Pending Support, and Collaborators List must be in 12-point font with 1-inch margins. The twelve elements are as follows:

(a) Standard Form 424. At the time of proposal submission, all applicants requesting direct funding must submit the Standard Form, SF-424, _Application for Federal Assistance,_ to indicate the total amount of funding proposed for their institution for the whole project period. This form is to be the cover page for the original proposal. Multi-institutional proposals must include signed SF-424 forms from all institutions requesting direct funding. Original signatures are required on SF-424 forms provided to a lead institution by a collaborating institution_s for grants.gov submission.

(b) Summary title page. The Summary title page identifies the project's title, starting with the acronym: and the Principal Investigator_s (PI) name and affiliation, complete address, phone, FAX and E-mail information. The requested budget for each fiscal year should be included on the Summary title page. Multi-institution proposals must also identify the lead investigator for each institution and the requested funding for each fiscal year for each institution on the title page. Lead investigator and separate budget information is not requested on the title page for institutions that are proposed to receive funds through a subcontract to the lead institution; however, an accompanying budget justification must be submitted for each subcontractor. For further details on budget information, please see Section (g) Standard Form SF-424A of this part.

(c) One-page abstract/project summary. A project summary (abstract) is to be submitted at time of application, shall include an introduction of the problem, rationale, scientific objectives and/or hypotheses to be tested, and a brief summary of work to be completed.

The summary should appear on a separate page, headed with the proposal title, institution(s), investigator(s), total proposed cost, and budget period. It should be written in the third person. The summary is used to help compare proposals quickly and allows the respondents to summarize these key points in their own words. Project summaries of applications that receive funding may be posted on program related websites.

(d) Project description. The description of the proposed project must include narratives of the Proposed Research and of the Applications to Management. The Proposed Research Narrative must be thorough and explicitly indicate its relevance to the program goals and scientific priorities by:

(1) Identifying the topic that is being addressed by the proposal;

(2) Describing the proposed scientific objectives and research activities in relation to the present state of knowledge in the field and in relation to previous and current work by the proposing principal investigator(s);

(3) Discussing how the proposed project lends value to the program goals;

(4) Identifying the function of each PI. The Lead PI (s) will be responsible for communicating with the Federal Program Manager on all pertinent verbal or written information. If applicable, the format and role of management and technical advisory committees should be included in this section. If required, proposals should specifically identify direct participation of resource manager(s) as co-Principal Investigators.

The Proposed Research Narrative should provide a full scientific justification for the research, rather than simply reiterating justifications presented in this document. Specific research activities must be divided into annual increments of work that include specific objectives and methodology.

The Applications to Management Narrative should establish the connection to relevant resource management needs by explicitly identifying the end user group(s) including evidence of the linkage between the scientific questions and management needs. This narrative should provide the management justification for the research through:

(1) Articulating the coordination with one or more management entities;

(2) Discussing the expected significance of the project to resource management priorities and needs. Specific management targets, with proposed outputs and outcomes, should describe how this project will improve management capabilities. Outputs are defined as products (e.g. publications, models) or activities that lead to outcomes (changes in management knowledge or action). Definitions and examples of outputs and outcomes can be accessed at www.cop.noaa.gov. The timeline for achieving outcomes should be included in the Milestone Chart (below).

The project description must not exceed 25 pages in 12-point, easily legible font with 1 to 2 pages for the Applications to Management Narrative and the balance used for the Proposed Research Narrative, inclusive of figures and other visual materials, but exclusive of references, a milestone chart, letters of intent from unfunded collaborators, and letters of endorsement.

(e) References cited. Reference information is required. Each reference must include the names of all authors in the same sequence they appear in the publications, the article title, volume number, page numbers, and year of publications. While there is no established page limitation, this section should include bibliographic citations only and should not be used to provide parenthetical information outside of the 25-page proposal descriptions.

(f) Milestone chart. Provide time lines of major tasks covering the duration of the proposed project.

(g) Standard Form 424A. At time of proposal submission, all applicants are required to submit a SF-424A Budget Form for each fiscal year increment. Multi-institution proposals must include a SF-424A for each institution, and multi-investigator proposals using a lead investigator with a contractor/subgrantee

approach must submit a SF-424A for each contractor/subgrantee. Each contractor or subgrantee should be listed as a separate item. Describe products/services to be obtained and indicate the applicability or necessity of each to the project. Provide separate budgets for each subgrantee or contractor regardless of the dollar value and indicate the basis for the cost estimates. List all subgrantee or contractor costs under line item 6.f. contractual on the SF-424A.

In order to allow reviewers to fully evaluate the appropriateness of costs, all applications must include a detailed budget narrative and a justification to support all proposed budget categories for each fiscal year. Personnel costs should be broken out by named PI and number of months requested per year per PI. Support for each PI should be commensurate with their stated involvement each year in the milestones chart (see Required Elements (f) Milestone chart).

Any unnamed personnel (graduate students, post-doctoral researchers, technicians) should be identified by their job title, and their personnel costs explained similar to PI personnel costs above. The contribution of any personnel to the project goals should be explained. Travel costs should be broken out by number of people traveling, destination and purpose of travel, and projected costs per person. Equipment costs should describe the equipment to be purchased, and its contribution to the achievement of the project goals. For additional information concerning each of the required categories and appropriate level of disclosure please see http://www.cop.noaa.gov/opportunities/grants/other_instructions.html.

Any ship time needs must be clearly identified in the proposed budget. The applicant is responsible for requesting ship time through appropriate channels and for meeting all requirements to ensure the availability of requested ship time. Copies of relevant ship time request forms (e.g. UNOLS ship request forms at http://www.gso.uri.edu./unols/ship/mainmenu.html. should be included with the proposal.

(h) Biographical sketch. All principal and co-investigators must provide summaries of up to 2 pages that include the following:

(1) A listing of professional and academic credentials and mailing address;

(2) A list of up to five publications most closely related to the proposed project and five other significant publications. Additional lists of publications, lectures, and the rest should not be included;

(i) Current and pending support. Describe all current and pending federal financial/funding support for all principal and co-investigators, including subsequent funding in the case of continuing grants. The capability of the investigator and collaborators to complete the proposed work in light of present commitments to other projects should be addressed. Therefore, please discuss the percentage of time investigators and collaborators have devoted to other Federal or non-Federal projects, as compared to the time that will be devoted to the project solicited under this notice.

(j) A list of all applicable permits that will be required to perform the proposed work(k) Provide one list that includes all collaborators, advisors, and advisees for each investigator (principal and co-principal investigators, post-docs, and subawardees), complete with corresponding institutions. Submit only one, combined and alphabetized list per proposal. Collaborators are individuals who have participated in a project or publication within the last 48 months with any investigator, including co-authors on publications in the resumes. Collaborators also include those persons

with which the investigators may have ongoing collaboration negotiations. Advisees are persons with whom the individual investigator has had an association as thesis advisor or postdoctoral sponsor. Advisors include an individual_s own graduate and postgraduate advisors. Unfunded participants in the proposed study should also be listed (but not their collaborators). This information is critical for identifying potential conflicts on interests and avoiding bias in the selection of reviewers.

(l) Proposal format and assembly. Proposals submitted via Grants.gov APPLY should follow the format guidelines below:

Attachments must be submitted in Adobe Acrobat PDF format to maintain format integrity. Please submit the required documents as described below.

Follow the instructions found on the Grants.gov web site for application submission into the Grants.gov system. All required forms that do not have specific placeholders in the _Mandatory Document_ box must be submitted in the Optional Form_ box as _Other Attachments_ and labeled with the document name i.e., budget narrative, project description, milestone chart etc.

For multi institutional proposal: The SF424_s of the additional institutions should be uploaded separately and labeled using the name of the institution/SF424 and then submitted in the _Optional Form_ box as _Other Attachments_. Combine all of the remaining required documents for the individual institution into one PDF file and submit the file labeled with the name of the institution. Repeat this procedure for each collaborating institution.

Save your completed application package with two different names before submission to avoid having to re-create the package should you experience submission problems. If you experience submission problems that may result in your application being late, send an e-mail to support@grants.gov and call the Grants.gov help desk. Their phone number is posted on the Grants.gov web site. The program manager associated with the RFA will use programmatic discretion in accepting late arriving proposals due to documented electronic submission problems. Please note: If more than one submission of an application is performed, the last application submitted before the due date and time will be the _official_ version.

In addition to the twelve required elements, it is requested the SF-424B, CD-511 and the indirect rate agreement be provided upon application submission. These forms can be uploaded in to the _Optional Form_ box under _Other Attachments_ in Grants.gov.

C. Submission Dates and Times

The deadline for receipt of proposals at the NCCOS/CSCOR office is 3 p.m., Eastern Time for both of the programs. For the Coral Reef Ecosystem Studies proposals are due October 9, 2008. For the Northern Gulf of Mexico proposals are due October 20, 2008.

(Note that late-arriving hard copy applications provided to a delivery service on or before the applicable above due date with delivery guaranteed before 3 p.m., Eastern Time on the applicable above due date will be accepted for review if the applicant can document that the application was provided to the delivery service with delivery to the National Oceanic & Atmospheric Administration, 1305 East-West Highway, SSMC4, Mail Station 8240 8th Floor, Silver Spring, Maryland 20910-3281 guaranteed by the specified closing date and time; and, in any event, the proposals are received in the NCCOS/CSCOR office by 3 p.m., Eastern Time no later than 2 business days following the closing date.)

D. Intergovernmental Review

Applications under this program are not subject to Executive Order 12372, Intergovernmental Review of Federal Programs._ It has been determined that this notice is not significant for purposes of Executive Order 12866. Pursuant to 5 U.S.C. 553(a) (2), an opportunity for public notice and comment is not required for this notice relating to grants, benefits and contracts. Because this notice is exempt from the notice and comment provisions of the Administrative Procedure Act, a Regulatory Flexibility Analysis is not required, and none has been prepared. It has been determined that this notice does not contain policies with Federalism implications as that term is defined in Executive Order 13132.

E. Funding Restrictions

Indirect Costs: Regardless of any approved indirect cost rate applicable to the award, the maximum dollar amount of allocable indirect costs for which DOC will reimburse the recipient shall be the lesser of (a) the line item amount for the Federal share of indirect costs contained in the approved budget of the award or (b) the Federal share of the total allocable indirect costs of the award based on the indirect cost rate approved by a cognizant or oversight Federal agency and current at the time the cost was incurred, provided the rate is approved on or before the award end date. NCCOS/CSCOR will not fund start up or operational costs for private business ventures and neither fees nor profits will be considered as allowable costs.

F. Other Submission Requirements

Proposals must include evidence of linkages between the scientific questions and management needs, such as the participation of co-investigators from both scientific and management entities. Proposals previously submitted to NCCOS/CSCOR RFAs and not recommended for funding must be revised and reviewer or panel concerns addressed before resubmission. Resubmitted proposals that have not been revised will be returned without review.

Applicants should contact the Program Manager for non-electronic submission instructions.Facimile submissions and electronic mail submission of full proposals will not be accepted.
Applications must be submitted through www.grants.gov, unless an applicant does not have internet access. In that case, hard copies with original signatures may be sent to:

Laura J. Golden
1305 East West Hwy
Routing Code: N/SCI2
Building: SSMC4
Silver Spring, MD 20910-3278

V. Application Review Information

A. Evaluation Criteria

1. Importance and/or relevance and applicability of proposed project to the program goals: This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, state, or local activities. For the _Coral Reef Ecosystem Studies: From Science to Conservation_ competition, proposals will be evaluated on the likelihood that will be able to implement a community-based management strategy to address the relevant problems that affect coral reefs and their related watersheds. For the _Northern Gulf of Mexico Ecosystems and Hypoxia Assessment Program_ competition, this includes the degree to which the proposed work will develop outcomes leading to improved management of hypoxia and impacted living resources in the targeted regions. (40 percent)

2. Technical/scientific merit: This assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives The proposed work should have focused objectives and a complete and technically sounds strategy for project design, methodologies, data management, data analysis, and development of products and outcomes in support of the objectives. (25 percent)

3. Overall qualifications of applicants: This ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project This includes the capability of the investigator and collaborators to complete the proposed work as evidenced by past research accomplishments, previous cooperative work, timely communication, and the sharing of findings, data, and other research products (15 percent)

4. Project costs: The Budget is evaluated to determine if it is realistic and commensurate with the project needs and time-frame (10 percent)

5. Outreach and education: NOAA assesses whether this project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources. The applicant must demonstrate clear connections to the relevant management entities that will use the results of the proposed work and define the specific products, outcomes, and timing of the proposed work that will be used in achieving this goal (10 percent)

B. Review and Selection Process

Once a full application has been received by NOAA, an initial administrative review is conducted to determine compliance with requirements and completeness of the application. All proposals will be evaluated and scored individually in accordance with the assigned weights of the above evaluation criteria by independent peer mail review and/or by independent peer panel review. Both Federal and non-Federal experts may be used in this process. The peer mail reviewers will be several individuals with expertise in the subjects addressed by particular proposals. Each mail reviewer will see only certain individual proposals within his or her area of expertise, and score them individually on a scale of one to five, where scores represent respectively: Excellent (5), Very Good (4), Good (3), Fair (2), Poor (1).

The peer panel will comprise 5 to 10 individuals, with each individual having expertise in a separate area, so that the panel, as a whole, covers a range of scientific expertise. The panel will have access to all mail reviews of proposals, and will use the mail reviews in discussion and evaluation of the entire slate of proposals. All proposals will be evaluated and scored individually. The peer panel shall rate the proposals using the evaluation criteria and scores provided above and used by the mail reviewers. The individual peer panelist scores shall be averaged for each application and presented to the program officer. No consensus advice will be given by the independent peer mail review or the review panel.

The program officer will neither vote or score proposals as part of the independent peer panel nor participate in discussion of the merits of the proposal. Those proposals receiving an average panel score of Fair or Poor will not be given further consideration, and applicants will be notified of non-selection.

For the proposals scored by the panel as either Excellent, Very Good, or Good', the program officer will (a) create a ranking of the proposals to be recommended for funding using the average panel scores (b) determine the total duration of funding for each proposal; and (c) determine the amount of funds available for each proposal subject to the availability of fiscal year funds. Awards may not necessarily be made in rank order. In addition, proposals rated by the panel as either Excellent, Very Good, or Good that are not funded in the current fiscal period, may be considered for funding in another fiscal period without having to repeat the competitive review process.

Recommendations for funding are then forwarded to the selecting official, the

Director of NCCOS, for the final funding decision. In making the final selections, the Director will award in rank order unless the proposal is justified to be selected out of rank order based on the selection factors listed below in C.

Investigators may be asked to modify objectives, work plans or budgets, and provide supplemental information required by the agency prior to the award. When a decision has been made (whether an award or declination), verbatim anonymous copies of reviews and summaries of review panel deliberations, if any, will be made available to the applicant. Declined applications will be held in the NCCOS/CSCOR for the required 3 years in accordance with the current retention requirements, and then destroyed.

C. Selection Factors

Based on the panel review scores, the program officer will provide a listing of proposals in rank order to the Selecting Official for final funding recommendations. A program officer may first make recommendations to the Selecting Official applying the selection factors below. The Selecting Official shall award in the rank order unless the proposal is justified to be selected out of rank order based upon one or more of the following factors:

1. Availability of funding.
2. Balance/distribution of funds:
    a. Geographically
    b. By type of institutions
    c. By type of partners
    d. By research areas
    e. By project type
3. Whether this project duplicates other projects funded or considered for funding by NOAA or other federal agencies
4. Program priorities and policy factors found in section I. B. Program Priorities
5. Applicants prior award performance
6. Partnerships and/or participation of targeted groups
7. Adequacy of information necessary for NOAA to make a NEPA determination and draft necessary documentation before recommendation for funding are made to the grants officer.

D. Anticipated Announcement and Award Dates

Subject to the availability of funds, review of proposals will begin in October 2008.

VI. Award Administration Information

A. Award Notices

The notice of award is signed by the NOAA Grants Officer and is the authorizing document. It is provided by postal mail or electronically through the Grants Online system to the appropriate business office of the recipient organization.

B. Administrative and National Policy Requirements

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of February 11, 2008 (73 FR 7696) are applicable to this solicitation.

Limitation of Liability

In no event will NOAA or the Department of Commerce be responsible for proposal preparation costs if these programs fail to receive funding or are cancelled because of other agency priorities. Publication of this announcement does not oblige NOAA to award any specific project or to obligate any available funds.

National Environmental Policy Act (NEPA)

NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act (NEPA), for applicant projects or proposals which are seeking NOAA federal funding opportunities. Detailed information on NOAA compliance with NEPA can be found at the following NOAA NEPA website: http://www.nepa.noaa.gov/, including our NOAA Administrative Order 216-6 for NEPA, ttp://www.nepa.noaa.gov/NAO216_6_TOC.pdf, and the Council on Environmental Quality implementation regulations, http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm). Consequently, as part of an

applicant's package, and under their description of their program activities, applicants are required to provide detailed information on the activities to be conducted, locations, sites, species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non-indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems).

In addition to providing specific information that will serve as the basis for any required impact analyses, applicants may also be requested to assist NOAA in drafting of an environmental assessment, if NOAA determines an assessment is required. Applicants will also be required to cooperate with NOAA in identifying and implementing feasible measures to reduce or avoid any identified adverse environmental impacts of their proposal. The failure to do so shall be grounds for the denial of an application.

In conformance with the Uniform Administrative Requirements for Grants and Cooperative Agreements section 15 CFR 14.36, any data collected in projects supported by NCCOS/CSCOR should be delivered to a National Data Center (NDC), such as the National Oceanographic Data Center (NODC), in a format to be determined by the institution, the NDC, and the Program Officer. Information on NOAA NDC_s can be found at http://www.nesdis.noaa.gov/datainfo.html. It is the responsibility of the institution for the delivery of these data; the DOC will not provide additional support for delivery beyond the award. Additionally, all biological cultures established, molecular probes developed, genetic sequences identified, mathematical models constructed, or other resulting information products established through support provided by NCCOS/CSCOR are encouraged to be made available to the general research community at no or modest handling charge (to be determined by the institution, Program Officer, and DOC).

C. Reporting

All performance (i.e. technical progress) reports shall be submitted electronically through the Grants Online system unless the recipient does not have internet access. In that case, performance reports are to be submitted to the NOAA program officer. All financial reports shall be submitted in the same manner.

VII. Agency Contacts

Technical Information: Program Managers contact information can be found under each program element listed in B. Program Priorities.

Business Management Information: Laurie Golden, NCCOS/CSCOR Grants Administrator, 301-713-3338/ext 151, Internet: laurie.golden@noaa.gov.

VIII. Other Information

Collection of information requirements

Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection displays a currently valid OMB control number.

This notification involves collection-of-information requirements subject to the Paperwork Reduction Act. The use of Standard Forms 424, 424A, 424B, and SF-LLL has been approved by the Office of Management and Budget (OMB) under control numbers 0348-0043, 0348-0044, 0348-0040 and 0348-0046.