

September 14, 2022

REQUEST FOR APPLICATIONS

**Understanding the Effects of Climate Change
on Environmental Hazards in Overburdened Communities**

NATIONAL
ACADEMIES

*Sciences
Engineering
Medicine*

GULF RESEARCH PROGRAM





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Questions can be emailed to gulfgrants@nas.edu

SUMMARY OF FUNDING OPPORTUNITY

This funding opportunity seeks to advance the understanding of climate hazard (e.g. extreme heat, sea level rise, flooding and extreme weather events) effects on communities that are overburdened¹ by environmental hazards (e.g., heat-related stress, air and water contaminants). The Gulf Research Program (GRP) is accepting applications from academic and research institutions for **projects that develop or augment models of the potential impacts of multiple, interacting climate hazards on local environmental health disparities.**² Cross-sectoral project teams, including the participation of public, private and non-profit organizations, and state, local and tribal governments are encouraged. GRP has made a total of \$5.5 million available to support projects under this funding opportunity and anticipates making individual awards ranging from \$1 – 1.5 million for projects not exceeding three years in duration.

Background

Climate change is intensifying adverse conditions such that multiple climate hazards (e.g. extreme heat, sea level rise, flooding and extreme weather events) will occur simultaneously and interact with non-climatic risks that threaten human health and well-being.³ Specifically, climate change exacerbates existing environmental hazards (e.g., heat-related stress, air and water contaminants) that are known to adversely affect human health outcomes (e.g., lower life expectancy, higher risk of asthma and cancer, increased exposure to food-borne and vector-borne illness).⁴ Communities overburdened by environmental hazards are likely to experience more intense health impacts than others,⁵ resulting in greater environmental health disparities when compared to communities exposed to less or fewer environmental hazards. This increased likelihood is particularly relevant to flood-prone communities in proximity to oil, gas, and petrochemical facilities along the U.S. Gulf Coast.

Models and data information products that identify areas overburdened by pollution and vulnerable to climate hazards are typically built on consistent and interoperable national datasets with known limitations in quality, coverage, and scale resolution. As a result, many models may not include localized data that could enable community stakeholders, planners, and decision-makers to fully understand current and future localized risks.⁶ New or augmented statistical and geospatial models that incorporate available localized data are needed to improve the understanding of how multiple climate hazards interact and may amplify environmental health disparities within communities under varying scenarios and timeframes.⁷

1 The U.S. Environmental Protection Agency defines “overburdened communities” in its Environmental Justice Glossary. See: <https://www.epa.gov/environmentaljustice/ej-2020-glossary>

2 According to the U.S. National Institute of Environmental Health Sciences, “Environmental health disparities exist when communities exposed to a combination of poor environmental quality and social inequities have more sickness and disease than wealthier, less polluted communities.” <https://www.niehs.nih.gov/research/supported/translational/justice/index.cfm#:~:text=Environmental%20health%20disparities%20exist%20when,than%20wealthier%2C%20less%20polluted%20communities>

3 Intergovernmental Panel on Climate Change (IPCC). 2022. Climate Change 2022: Impacts, Adaptation and Vulnerability Summary for Policymakers, p. 20. Available at https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf.

4 Ibid.

5 Bullard, Robert D., and Glenn S. Johnson. 2020. Environmental Justice: Grassroots Activism and Its Impact on Public Policy Decision Making. *Journal of Social Issues* 56 (3): 555-578.

6 See: Limitations and Caveats in Using EJScreen, <https://www.epa.gov/ejscreen/limitations-and-caveats-using-ejscreen>

7 See: International Panel on Climate Change, Developing and Applying Scenarios. Available at: <https://www.ipcc.ch/report/ar3/wg2/chapter-3-developing-and-applying-scenarios/>

PURPOSE OF FUNDING OPPORTUNITY

This funding opportunity seeks to advance the understanding of climate change effects on local environmental health disparities under varying scenarios and timeframes.

This funding opportunity will support projects within the GRP's focus regions that:

1. Investigate and model interactions of multiple climate hazards (e.g., extreme temperatures and weather events, flooding, sea level rise) on localized environmental hazards (e.g. human exposure to air and water contaminants) using existing and publically-available data; and
2. Project the resulting environmental health disparities (lower life expectancy, higher risk of asthma and cancer, increased exposure to food-borne and vector-borne illness) under varying scenarios and near, mid, and long-term timeframes.

All projects will produce:

1. A report that includes:
 - o A description of the study design and methodology, including a discussion on limitations and strengths; and,
 - o Based on the results of the analysis, the identification of future implications and/or potential strategies and actions that could be taken to reduce climate change effects on localized environmental health disparities.
2. Data information products, models, geospatial maps, or interactive tools that visualize the potential interactions and effects of climate change and environmental hazards on health in overburdened communities.

AWARD DETAILS

Total Amount Available: \$5.5 million

Award per grantee: Up to \$1-1.5 million

Period of Performance: Up to 36 months

Estimated Number of Awards: 3-5

KEY DATES

The following dates pertain to this funding opportunity. Please note that dates may be adjusted at any time. Be sure to check our website regularly for the most up-to-date information.

- **September 14, 2022:** Application submission site opens
- **November 11, 2022:** Application deadline (due by 5:00 p.m. Eastern Time)
- **March 2023:** Award selection and notification
- **May 2023:** Anticipated funding start date

ELIGIBILITY CRITERIA

This funding opportunity is open to academic and research institutions that meet all of the following eligibility criteria:

- All applicants must have a valid federal tax ID number
- Non-profit applicants must have current 501 (c)(3) status in good standing
- Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Research Centers (UCARCs) can be named as sub-awardees, however, they must have the authority to obtain funding for work outside of their federal sponsor contract and not be proposing to do work they are otherwise doing under their federal sponsor contract.
- U.S. federal agencies are not eligible to receive GRP funding as applicants or sub-awardees. However, federal employees may be included as non-funded collaborators and project team members.
- BP Exploration and Production, Inc. (BP), Transocean Deepwater, Inc. (Transocean), their affiliates, and employees are not eligible to receive grant funding or to participate as team members in any grant.

REQUIREMENTS

FOR THE APPLICANT

This funding opportunity will support the applicant, including the individual who will lead the proposal (the “project director”), as well as any key personnel (the “project team”). The GRP expects that the project or project director and project team adhere to the following requirements:

- An individual may be named as project director in only one application under this funding opportunity.
- An individual, including a project director, may be named as a project team member in any number of other applications.
- If an individual appears on multiple proposals, a clear description should be included to explain how the proposed work is complementary and not duplicative of other proposed efforts and how the participant will budget their time.

FOR THE PROPOSAL

To be considered for this funding opportunity, the proposed project or program must:

- Consist of new, distinct activities only. Proposed activities that augment a broader, existing effort or project may be eligible if the proposal clearly demonstrates that the funding request is for new, distinct activities that would not otherwise occur;
- Analyze the potential multivariate effects under varying climate change scenarios on local environmental hazards and the resulting environmental health disparities; and
- Produce data information products, models, geospatial maps, or interactive tools that may be used to communicate the potential interactions and effects of climate change and environmental hazards on health in overburdened communities.

Additionally, the proposed project or program must NOT:

- Consist of activities that may be classified as lobbying or advocacy.

APPLICATION SUBMISSION

The GRP will only accept proposals submitted via the [online application system](#). Proposal materials submitted in any language other than English will not be considered. Only proposals meeting the eligibility criteria and determined to be responsive to the Request for Applications (RFA) will be considered. The GRP may reject, without review, proposals that are not responsive to this RFA. Please review the proposal's application preparation and submission instructions and submit any questions to gulfgrants@nas.edu before the submission deadline. While the GRP strives to respond to applicants' questions within two business days, we cannot guarantee that questions will be answered before the submission deadline.

APPLICATION ELEMENTS

The proposal must include the following elements:

- **General Applicant Data** (Details about the project director's and each project team member's contact information and roles.)
- **Project Summary** (An overview of the proposed project written for a scientifically or technically literate person. Maximum 250 words.)
- **Project Details** (Details about the project's duration and location, and a description of the target population.)
- **Project Design**
 - **Project Justification** (A summary of the challenge that the project will address and may include a brief summary of relevant work done in the past as well as any evidence gaps the project hopes to address. Maximum 500 words.)
 - **Project Goal and Objectives** (A clear statement of the project objectives and/or research questions the project will address. Maximum 300 words.)
 - **Project/Research Plan** (A description of the project design, procedures, and analyses to be used to accomplish the specific project objectives as well as descriptions of any collaborations/partnerships, and potential limitations and alternatives. Maximum 3,000 words.)
 - **Timeline** (Details for the anticipated project initiation, milestones, and completion dates. May be a Gantt chart or description of 500 words maximum.)
 - **Citations**
 - **Figures, Diagrams, and Tables** (optional)
- **Project Team/Personnel** (A description of the project director's and each project team member's research and/or practical experience related to the selected community, project location, and/or topic. Maximum 500 words.)
- **Project Partners** (A description of stakeholders who will be approached to join the project as partners and/or collaborators. Maximum 500 words.)
- **Anticipated Impact** (A statement describing how the project aims to improve health and/or community resilience in the target/study population, build capacity in the community and/or within the project team, and how impact will be assessed and measured. Maximum 500 words.)
- **Data Management Plan** (A description of how data will be collected, managed, stored, and protected throughout the project. Maximum 1,500 words.)
- **Communications and Dissemination** (A description about how the project results and findings will be communicated and disseminated to key stakeholders and the broader community.)
- **Procedural Information** (For projects involving human subjects research, a statement about Institutional Review Board approval/exemption, and a description of the risks to subjects and how those risks will be mitigated.)
- **Project Budget** (The total amount requested, including direct and indirect costs, not to exceed the maximum specified in this RFA. Must also include a budget justification.) Download the budget form and justification template below:
 - [Budget Form](#)
 - [Budget Justification \(Sample\)](#)
- **Other Required Attachments** (e.g., resumes for the project director and project team member, Collaborators and Other Affiliations Form, Current and Pending Support form.) Download the specifications and templates below:
 - [Resume Specifications](#)
 - [Collaborators and Other Affiliations Form](#)
 - [Current and Pending Support Form](#)
- **Optional Attachments** (e.g., letters of support, strategic plan. Maximum 3 documents.)

For additional information and instructions about the application elements, please review the application form via the [online application system](#).

PEER REVIEW PROCESS

All eligible and responsive proposals received under this funding opportunity will undergo a peer review process. Only complete applications deemed eligible and responsive to the funding opportunity will be evaluated by external reviewers based on the Merit Review Criteria (see below). The final decision for funding will be made by the National Academies of Sciences, Engineering, and Medicine (NASEM) and will take into consideration the reviewers' evaluations and the program's funding availability, current portfolio, objectives, and goals. To review the GRP's conflict of interest and confidentiality policies, [please visit our website](#).

MERIT REVIEW CRITERIA

Proposals will be evaluated on the basis of four review criteria. The bullets under each criterion should guide applicants in writing their proposals and guide reviewers in evaluating a proposal.

Proposals will be evaluated on the basis of four review criteria. The following criteria should guide the applicants in the writing stage and will guide reviewers in evaluating the final proposal.

Relevance (35%)

- To what extent is the proposal aligned with the purpose of the funding opportunity?
- To what extent does the proposal provide a well-justified rationale for the selection of the project study area(s) (i.e. overburdened communities within the GRP focus regions) and their need for localized models?
- To what extent could the project approach and/or anticipated data products and/or tools potentially be used or adapted for other communities?

Scientific Merit and Project Design (35%)

- To what extent does the proposal identify appropriate data and/or data sources to support the project goals and objectives?
- To what extent does the proposal describe the appropriate model type, variables, and methods (e.g. data collection, sampling design, scale, validation, and potential limitations) to support the project goals and objectives?
- To what extent does the proposed analysis, model, geospatial maps, or other data information product have the potential to advance the understanding of multivariate climate change effects on environmental health disparities within overburdened communities?

Project Team (20%)

- To what extent are the project director and project team members well-qualified in their experience, knowledge, and skills to ensure the completion of a successful project or program?

Budget and Feasibility (10%)

- To what extent is the budget commensurate with the proposed project or program activities?
- To what extent is the proposal feasible within the proposed award period?

DATA MANAGEMENT POLICY

The GRP follows the federal government's definition of data in the Office of Management and Budget (OMB) 2 Code of Federal Regulations (CFR) Section 200.315: "...the recorded factual material commonly accepted in the scientific community as necessary to validate research findings." To facilitate sharing of data information products, all applications submitted to the GRP must include a data management plan and follow FAIR guiding principles (Fair stands for "Findable, Accessible, Interoperable, Reusable"). To learn more about FAIR guiding principles, refer to the [Open Science by Design: Realizing a Vision for 21st Century Research](#) National Academies report. In the case in which a proposed project anticipates no collection, production, or generation of data information products (i.e., data, data sets, or software products), the full proposal must contain a

management plan that states, “This project will not result in the production of the kind of data or other information products necessary to validate research findings,” with a short description as to why no data or information products will be created. If the project anticipates collection, production, or generation of data information products, the GRP will work with the project director to submit the appropriate documentation, including a data management plan, before an award can be made. Visit our website for [more information about the GRP’s data management policy](#).

RESEARCH INVOLVING HUMAN SUBJECTS POLICY

All projects involving human subjects must be submitted to an institutional review board (IRB) for review and either receive IRB approval or be granted exemption from human subjects’ regulations before an award can be made. Proposers should file their application with their local IRB at the same time the application is submitted to the GRP so that any approval procedure determined as necessary will not delay the award process. An application may be submitted to the GRP prior to receiving IRB approval or being granted exemption; however, if the application is selected for funding, the award will be made conditional upon IRB granting approval or exemption from human subjects’ regulations within 60 days of the notice of conditional award. If a proposed project involving human subjects is granted exemption from human subjects’ regulations [see 45 CFR 46.101 (b)], the applicant must provide documentation that an IRB (or the appropriate authority other than the Project Director or Key Personnel) has declared the project exempt from the human subjects regulations. Documentation should include the specific category justifying the exemption. Organizations without internal access to an IRB must seek approval or exemption from an independent review board or other appropriate authority.

AWARD SELECTION

SELECTION NOTIFICATION

The GRP reserves the right to select all, some, one, or none of the proposals received in response to this solicitation. When the evaluation of a proposal is complete, the project director will be notified that (1) the proposal has been selected for funding pending contract negotiations, or (2) the proposal has not been selected. These official notifications will be sent via email to the project director identified on the application. If a proposal is selected for award, the GRP reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to, indirect cost information or other budget information. Awardees are free to accept or reject the grant agreement as offered.

AWARD NOTICE

The GRP transmits award notices to organizations via e-mail. The award is not finalized and the National Academies of Sciences, Engineering, and Medicine is not obligated to provide any funding until a signed copy of the award agreement has been received by the Academies.

POST-AWARD MANAGEMENT

SCIENTIFIC INTEGRITY

A fundamental purpose of the GRP is to facilitate the advancement of knowledge and the application of science to address challenges relevant to the Program’s mission. All activities of the GRP, including those of its grantees, will be conducted to meet the highest standards of scientific integrity.

GRANT TERMS AND CONDITIONS

Please review the Grant Agreement prior to submitting an application. It is the policy of National Academies of Sciences, Engineering, and Medicine to entertain potential modifications to the Grant Agreement only under the most exceptional circumstances. Rather, successful applicants are strongly encouraged to sign the Grant Agreement as presented.

- [View a sample grant agreement if the applicant is a public institution.](#)
- [View a sample agreement if the applicant is a private institution.](#)

GRANT PERIODS

Upon receipt of the award notice, the awardee should note the effective date and the expiration date. Effective date is the date specified in the grant notice on or after which expenditures may be charged to the grant. Charging expenditures to the grant prior to the effective date is prohibited. Expiration date is the date specified in the grant notice after which expenditures may not be charged against the grant except to satisfy obligations to pay allowable project costs committed on or before that date. Once an award is made, the effective date cannot be changed. The expiration date may be changed as a result of approval of a request for a no-cost extension. If approved, the GRP will issue an amendment to the grant. If additional time beyond the performance period and the established expiration date is required to assure adequate completion of the original scope of work within the funds already made available, the awardee may apply for a one-time, no-cost extension of up to six months. A formal request must be submitted to the GRP at least 45 days prior to the expiration date of the grant. The request must explain the need for the extension and include an estimate of the unobligated funds remaining and a plan for their use. This one-time extension will not be approved solely for the purpose of using the unliquidated balances.

ABOUT THE GULF RESEARCH PROGRAM

The GRP is a division of the National Academies of Sciences, Engineering, and Medicine founded in 2013 with settlement monies related to the 2010 Deepwater Horizon explosion and oil spill. The GRP seeks to enhance offshore energy safety, environmental protection and stewardship, and human health and community resilience in the U.S. Gulf of Mexico and southcentral coast of Alaska, where Outer Continental Shelf (OCS) oil and gas drilling, production, and transportation occur. Within the GRP, the Gulf Health and Resilience Unit's objectives are to:

- Reduce and ultimately eliminate inequities in health and community resilience;
- Advance research and practice in health and community resilience; and,
- Promote a culture of health and community resilience.

To read more about the Gulf Research Program and its units, please visit our [website](#).

DIVERSITY, EQUITY, INCLUSION, AND JUSTICE

The GRP takes issues of equity and justice very seriously. We are committed to promoting diversity, equity and inclusion in our work, and exercising these principles in our staffing, granting, board appointments, and fellowships. No person on grounds of race, color, age, sex, national origin, religion, marital status, pregnancy, parenthood, or disability shall be excluded from participation in, denied the benefits of, or be subjected to discrimination under this program.