

## Program Information Sheet

### Program Name

**Climate Program Office, Climate and Societal Interactions Division  
Adaptation Sciences (AdSci) Program**

### Program Mission

The [Adaptation Sciences \(AdSci\) program](#), an interdisciplinary research and engagement program, is housed in the NOAA [Climate Program Office's \(CPO\) Climate and Societal Interactions \(CSI\) Division](#). The CSI Division has traditionally been a home for high-impact science, catalyzing some of the earliest U.S. government investments in regionally scaled, societally relevant, interdisciplinary climate research and engagement focused on reducing vulnerability and risk through the use of climate knowledge and information.

Today, CSI continues to work with partners to enhance community, cross-sectoral, and national and international resilience in the face of climatic changes, through human-centered research, engagement and capacity building activities designed to connect innovative science directly to complex and dynamic preparedness, adaptation, and resilience challenges and opportunities. It is increasingly imperative that as society incorporates a changing climate into “mainstream” planning, and risk management and resilience efforts, we seek to identify, design and implement adaptation efforts that align with and underscore other social, economic and environmental benefits, including equitable and transformational adaptation, when feasible.

CSI is composed of two core programs, the [Adaptation Sciences \(AdSci\)](#) programs and the [Climate Adaptation Partnership \(CAP/RISA\)](#) program, leveraging the unique approaches and contributions of each for advancing adaptation and resilience, in order to optimize the investment of NOAA resources in support of societal needs.

CSI's Adaptation Sciences (AdSci) Program advances the knowledge, methods, and frameworks needed to move society beyond incremental adaptation toward more widespread, connected, and transformative adaptive pathways and resilience strategies with clear economic, social, cultural and environmental co-benefits. This work is conducted through a combination of dedicated partnerships that support capacity building and engagement activities, and competitive research awards designed to address key knowledge and information needs. Given the global complexities involved in climate impacts and society's adaptive strategies, the AdSci program supports work both within and outside of the United States.

AdSci has two core objectives:

- Developing an understanding of key drivers and conditions that shape and enable adaptation across multiple temporal and spatial scales, in particular geographies and settings where this knowledge can be practically applied to efforts to reduce risk and enhance resilience in equitable ways; and
- Identifying key aspects of and promoting opportunities for the use of scientific information to best support preparedness and planned adaptation of high value to social and economic goals.

AdSci research projects generally include and are shaped by focused engagement with stakeholders, with attention to participation from relevant sectors and communities with roles to play advancing the evaluation, assessment and implementation of new approaches to adaptation and resilience. AdSci projects are conducted at scales designed to expand the availability, accessibility and use of climate information in the context of public and private decision-making. Projects seek to enhance community, sub-regional and regional national engagement and networks that incorporate locally relevant knowledge, support local decision making, and the co-development of effective climate services, techniques, best practices, methods and frameworks to support decision makers in related areas of food security and sustainable food systems, water resources, public health and safety, infrastructure, disaster preparedness, nature based solutions (NBS), and low-carbon resilience strategies.

Learn more about AdSci at <https://cpo.noaa.gov/AdSci>

### Focus and Key Dates for FY 2024

Through the FY24 Notice of Funding Opportunity (NOFO), the Adaptation Sciences Program is soliciting applications for two competitions in FY 2024:

1. Evidence-building, Evaluation and Learning Approaches to Support Adaptation to a Changing Climate
2. Developing a Social Science Research Agenda to Support Adaptation and Resilience

Key Dates: Letters of intent (LOIs) should be received via Google Form (<https://forms.gle/X8Cfvh8feMLuWtdQA>) by 11:59 pm Eastern Time on **December 26th, 2023**.

Full applications must be received by 11:59 pm Eastern Time, on **March 20th, 2024**.

## Funding for FY 2024

Competition 1: Proposals should be for projects up to 2 years duration with a budget of up to \$150,000 per year (for a maximum total of \$300,000.00 total). Depending on the availability of funds, it is anticipated that 5-7 projects will be supported.

Competition 2: Proposals should be for projects up to 2 years duration, with a total budget in the range of \$150,000- \$300,000 (proposals should distribute the budget over the two year period to reflect the methodology used for the project). Depending on the availability of funds, it is anticipated that 1 project will be supported.

## FY 2024 Competition Overview and Program Priorities

Adaptive actions are taking place around the world to address climate-related risks to infrastructure, livelihoods and ecosystems, food security, human health, water resources and peace/security. However, the effectiveness of discrete adaptation actions varies greatly. Many tend to focus more on reducing shorter-term risks, sometimes at the expense of longer term, more transformative adaptation. Sustainable and fundamental changes that address compound risks and impacts that cascade across sectors, communities, jurisdictions, and national borders are needed in order to avoid maladaptation<sup>1</sup>, and effectively meet the challenges to society posed by a changing climate. The substantial shifts required to effect changes across policies, governance structures, institutional frameworks, budgetary procedures and mindsets will have to achieve various degrees of coordination in order to reach system-wide adaptation. Substantial improvements in accessible techniques for monitoring, evaluation, and assessment are needed to support decision makers as they consider costs, benefits, and timeframes for implementation of effective adaptive actions.

For example, nature-based solutions (NBS) are gaining international recognition as they can provide protection against these threats while also offering additional co-benefits for the environment, society, and the economy when designed appropriately for local conditions.<sup>2, 3</sup> However, one major challenge in the widespread adoption of NBS has been the lack of knowledge regarding how well they perform over the long term, including their impact on social,

---

<sup>1</sup> Schipper, E. L. F. (2020). Maladaptation: when adaptation to climate change goes very wrong. *One Earth*, 3(4), 409-414.

<sup>2</sup> Shiao T., C. Kammeyer, G. Brill, L. Feinstein, M. Matosich, K. Vigerstol, and C. Müller-Zantop. 2020. Business case for nature-based solutions: landscape assessment. United Nations Global Compact CEO Water Mandate and Pacific Institute. Oakland, California. <https://ceowatermandate.org/nbs/wp-content/uploads/sites/41/2020/08/landscape.pdf>.

<sup>3</sup> Bridges, T.S., J.K. King, J.D. Simm, M.W. Beck, G. Collins, Q. Lodder, and R.K. Mohan. 2021. International guidelines on natural and nature-based features for flood risk management. Vicksburg, MS, USA: Army Engineer Research Development Center. <https://hdl.handle.net/11681/41946>.

economic, and cultural outcomes. Additional research supporting the development of effective evaluation, monitoring, and assessment, in partnership with communities affected by decisions, is needed to provide more comprehensive analysis of NBS and other potential adaptation approaches that can be replicated and/or scaled up.

“Transformative adaptation”<sup>4</sup> refers to efforts designed to foster systemic change by understanding and addressing the social, economic, cultural, and governance norms that shape vulnerability and climate resilience.<sup>5</sup> Transformative adaptation involves a longer-term perspective on adjusting to climate change that combines cross-sectoral, coordinated actions that occur over multiple time scales (including the potential for strategies with co-benefits for mitigation), innovations in technology and policies, and potentially new ways of thinking about the relationship between humans, culture, and environment<sup>6, 7</sup>. Evaluation and learning are critical elements in sustainable and transformative efforts, as outcomes (including those for future generations) from selected strategies, approaches, investments, and choices will need to be monitored, assessed, and evaluated to better understand who is affected and how, and revisited and potentially modified over time to optimize benefits. This need for evaluation in order to maximize the benefits of adaptation is especially critical with regard to better understanding, and informing equitable adaptation solutions.

A growing body of literature in the adaptation and resilience realm identifies a clear need for an expanded knowledge base related to evaluation in support of adaptation and resilience.<sup>8, 9</sup> Addressing this gap through evidence-based research and learning is of particular importance to NOAA as the agency and its partners are increasingly investing in research and implementation activities designed to support climate adaptation and resilience in the U.S. and abroad through, and in support of, various NOAA programs and interagency frameworks<sup>10</sup>.

---

<sup>4</sup> Note that while the term “transformative” adaptation is used in this context, throughout the literature both “transformative” and “transformational” refer to an adaptive process that leads to fundamental shifts in systems.

<sup>5</sup> Fedele, G., Donatti, C. I., Harvey, C. A., Hannah, L., & Hole, D. G. (2019). Transformative adaptation to climate change for sustainable social-ecological systems. *Environmental Science & Policy*, 101, 116-125.

<sup>6</sup> Revi, A., Satterthwaite, D., Aragón-Durand, F., Corfee-Morlot, J., Kiunsi, R. B., Pelling, M., Roberts, D., Solecki, W., Pahwa Gajjar, S. & Sverdluk, A. (2014). Towards transformative adaptation in cities: the IPCC’s Fifth Assessment. *Environment and Urbanization*, 26(1), 11-28.

<sup>7</sup> Wasley, E., T.A. Dahl, C.F. Simpson, L.W. Fischer, J.F. Helgeson, M.A. Kenney, A. Parris, A.R. Siders, E. Tate, and N. Ulibarri, 2023: Ch. 31. Adaptation. In: *Fifth National Climate Assessment*. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023.CH31>

<sup>8</sup> Berrang-Ford, L., Siders, A.R., Lesnikowski, A. et al. A systematic global stocktake of evidence on human adaptation to climate change. *Nat. Clim. Chang.* 11, 989–1000 (2021). <https://doi.org/10.1038/s41558-021-01170-y>

<sup>9</sup> Chausson, A., Turner, B., Seddon, D., Chabaneix, N., Girardin, C. A., Kapos, V., Key, I., Smith, A., Woroniecki, S. & Seddon, N. (2020). Mapping the effectiveness of nature-based solutions for climate change adaptation. *Global Change Biology*, 26(11), 6134-6155.

<sup>10</sup> Examples include [Executive Order 14008 -Tackling the Climate Crisis at Home and Abroad](#) , The [NOAA/CPO Climate Adaptation Partnerships](#) (CAP) program, [Building a Climate Ready Nation](#) , The [Nature-Based Solutions Roadmap](#) , The [Justice40 Initiative](#) , The [Inflation Reduction Act](#) (IRA), The [Bipartisan Infrastructure Law](#) (BIL), The [President’s Emergency Plan for Adaptation and Resilience](#) (PREPARE).

Toward this end, the Adaptation Sciences program is soliciting applications for two competitions in FY 2024.

### **Competition 1: Evidence-building, Evaluation, and Learning Approaches to Support Adaptation to a Changing Climate**

In FY24, the Adaptation Sciences program is seeking proposals for evaluation and evaluation research that advances evaluation methods and approaches in order to support more transformative adaptation and resilience. Research proposals should seek to undertake one or both of the following:

- A. Expand the evidence base for evaluating adaptation actions and investments, including the identification of metrics and frameworks, with an emphasis on those that measure social and economic outcomes of adaptation (including equity) and advance society's capacity to compare and/or scale up approaches.
- B. Develop the frameworks, partnerships, approaches and methods needed to evaluate adaptation, including those elements that move society toward more transformative pathways.

We expect that much of the work supported by Competition 1 will focus on adaptation in U.S. states and territories; however, proposals will also be considered with a focus on one or more of the broadly defined regions that border the U.S: a) the Caribbean; b) the Pacific Islands; c) Mexico and Central America; d) the Arctic. Regional and/or comparative studies focusing on multiple areas from this list also will be considered.

Projects supported under this competition could:

- Contribute new and applicable insights on the characteristics, co-effects, and enabling conditions, including governance, associated with climate adaptation strategies and investments through the systematic analysis and evaluation of case studies, with the goal of building an evidence base and advancing learning.
- Generate new or improved evaluation methods, approaches and insights related to the role of knowledge systems and processes - including networks of boundary organizations and climate information services knowledge networks - in moving society toward transformative adaptation.

- Identify and develop key metrics and/or indicators that capture the relationship between processes that occur within these systems, including co-production and the integration of local knowledge, and complex equity considerations.
- Identify and/or develop evaluation measures and indicators that reflect the social dimensions of adaptation (e.g., governance, culture, equity, participation).
- Identify and enhance knowledge about the methods of evaluation and for sharing information and learning that are most appropriate for different types of actors in the decision making context (e.g., indigenous communities, local planners, public service providers, private sector, local, state, Tribal and national governments).

### **Competition 2: Developing a Social Science Research Agenda in Support of Adaptation and Resilience**

Understanding the societal, economic, cultural and behavioral aspects that shape risk, vulnerability and responses to climate change is essential to meeting the needs of decision makers, and supporting the development of effective adaptation and resilience strategies. As a result, there is a growing need for an organized, well-articulated social science research agenda that supports the integration of the social sciences in climate and risk assessments<sup>11</sup>, and the development of effective adaptation strategies that are meaningful across scales of decisions and communities, and relevant to supporting the foundations of transformative change. Through Competition 2, AdSci is seeking proposals that will generate a social science research agenda, which reflects existing knowledge, and identifies gaps that can be addressed to support adaptation and resilience efforts. This can be achieved through inclusive review, analysis, and assessment of scientific literature, climate adaptation plans and actions, local knowledge and other similar information, in addition to engagement processes to inform social science research needs.

This work should develop and articulate a coherent set of nested research questions and approaches that will provide a framework for the generation of knowledge, methods and insights essential to the development, implementation and evaluation of effective adaptation strategies, policies and investments. It should be useful to the interdisciplinary scientific community and the broader landscape of entities, including funding agencies and implementation partners, working in this space.

Specific attention should be placed on social science research needs to support and assess transformational adaptive pathways. The work should:

---

<sup>11</sup> Maxwell K, Eisenhauer E, Lustig A. Toward Coequality of the Social Sciences in the National Climate Assessment. *Weather Clim Soc.* 2022 Oct 1;14(4):1219-1229. doi: 10.1175/wcas-d-21-0157.1. PMID: 36545267; PMCID: PMC9762488.

- build on the current state of science and knowledge, including indigenous, traditional and other non-western ways of knowing;
- reflect a diverse suite of disciplinary expertise and perspectives in order to ensure that the social science agenda has applications for addressing real world challenges and opportunities associated with large scale adaptive capacity related to food and water security, human settlements, human and ecosystem wellbeing, conservation, infrastructure, migration, etc;
- incorporate the experience, perspectives and needs of stakeholders including frontline communities, tribes, indigenous populations and the private sector;
- address knowledge gaps and opportunities for social science research as a complement to physical and natural climate science, and climate services endeavors;
- address knowledge gaps that, if addressed, will support progress toward socio-economic and environmental outcomes and co-benefits, including those with cultural, local and heritage significance; and
- include an international perspective on questions that have global relevance and implications.

### **Additional Information**

#### *General*

All applicants should carefully **review all sections of the NOFO**, and ensure that they are providing adequate time to meet the requirements for receiving Federal funding outlined Section IV, C: Unique Entity Identifier and System for Award Management (SAM).

#### *Information Sessions*

The Adaptation Sciences team will hold at least one virtual information session to answer questions and review the application process shortly after the release of the Notice of Federal Funding Opportunity (NOFO) and prior to the Letter of Intent deadline (see below for additional information about the LOIs).

There will then be a second session focused on developing full proposals. Please check the [CPO website for details](#), and/or email us at [noaa.adaptation.sciences@noaa.gov](mailto:noaa.adaptation.sciences@noaa.gov) and ask to be placed on a distribution list to receive information about the date and time.

#### *AdSci Approaches*

Proposed work should:

- Leverage and connect to the research, priority setting and engagement capacity of key partners (e.g. international, regional, Federal, state, local, tribal, NGO, private sector and community-based organizations) to identify and share methods, capacities and conditions needed to effectively utilize and incorporate interdisciplinary climate information science and services for adaptation and resilience.
- Engage with organizations, including the private sector, working in economic and community development, and seek to connect with efforts to support the financing and/or evaluation of adaptation actions or strategies in order to foster more evidence-based policies.
- Support research and evaluation activities as opposed to discrete adaptation project implementation activities outside of a learning framework (e.g., the implementation of a nature based solution in a specific community).
- All projects should incorporate the principles of justice, equity, diversity, and inclusion. Applicants should demonstrate a plan to carry out their work in ways that acknowledge existing legacies of social and environmental inequities and support actions that address them, including but not limited to the inclusion of frontline community members.

#### *Proposal Writing Guidance*

Competitive proposals will show that the work being produced will build on what is already known from practitioner experience, traditional knowledge and the published literature about the proposed topic. The proposal should demonstrate that the PIs have a comprehensive knowledge and expertise and that their proposed work will augment the existing knowledge and engagement. It is strongly encouraged to maximize readability by using plain language, structuring content logically, placing figures near relevant text, and using graphics, maps, or tables for appropriate content

#### *Interaction with NOAA and Partners*

Applicants whose proposals are chosen for funding will be expected to undertake an ongoing dialogue with the NOAA Climate Program Office and relevant NOAA partners, including the interagency community. This could include a series of coordination and communication activities to share research methods and results, support collaboration and information exchange, share lessons learned and optimize the outcomes of their projects. Project teams will be expected to submit annual and final reports and respond to periodic data and information requests.

#### *Letters of Support*

Letters of Support and/or commitments from partners are not required as a component of the full application. However, up to 10 letters may be submitted and can be used to supplement information included in the Full Proposal, and they will be taken into consideration when evaluating the proposal if submitted as part of the application. When collecting letters of support, applicants should prioritize partners whose terms of engagement and participation are already well developed or in the process of developing. Potential partners or partners at the very early stages of engagement should be described in the narrative as part of the proposal's engagement strategy. The letters supplement the reviewers' understanding from the full proposal, so letters are particularly useful where they provide a sense of the prior relationship or level of interest from critical and/or nontraditional partners.

Please note that leveraging and in-kind sharing of resources should be reported within the Full proposal proposal. For example, unfunded collaborations should be documented in the body of the full Proposal (the sections included in page count), and a Letter of Support from the unfunded collaborator could be included as a supplement (not included in the page count). In another example, if the proposal includes key stakeholders or users, this should be documented in the Full Proposal, and a supplementary letter of support could be included to convey the value of the project to the stakeholder or users.

#### *Justice, Equity, Diversity, and Inclusion (JEDI)*

The AdSci program encourages applicants and awardees to support the principles of justice, equity, diversity, and inclusion (JEDI) when writing their proposals and while performing their work. Ensuring justice and equity means paying particular attention to populations most vulnerable to the impacts of climate change, which are often low-income communities, historically marginalized communities, indigenous and tribal communities, those already overburdened by pollution, those who lack economic or social opportunity, and people facing disenfranchisement. Diversity here is defined as a collection of individual attributes that together help organizations achieve objectives. Inclusion is defined as a culture that connects each person to the larger organizing structure. Promoting JEDI improves the creativity, productivity, and vitality of the communities in which the program engages.

#### *Administrative Highlights for First Time Applicants*

Eligible applicants are institutions of higher education, other nonprofits, commercial organizations, international organizations, and state, local and federally recognized tribal governments. Federal agencies or institutions are not eligible to receive Federal assistance under this notice. (See "special instructions for federal applicants" on the CPO website.) Applying for a NOAA grant entails some administrative preparation. Please note that this can take time (up to four weeks), so please make sure you allow for this process prior to applying. To avoid delays, applicants are strongly encouraged to start early and not wait until the approaching application deadline before registering, logging in, reviewing the application instructions, and applying.

Information about the Grants.gov registration process for organizations can be found at [http://grants.gov/applicants/organization\\_registration.jsp](http://grants.gov/applicants/organization_registration.jsp). In order to submit an application through Grants.gov, an applicant must register for a Grants.gov user ID and password. Note that this process can take between three to five business days or as long as four weeks if all steps are not completed correctly.

#### Unique Entity Identifier and System for Award Management (SAM)

Excerpt 2 CFR 200 Appendix I.D.3: Each applicant (unless the applicant is an individual or Federal awarding agency that is excepted from those requirements under 2 CFR 25.110(b) or (c), or has an exception approved by the Federal awarding agency under 2 CFR 25.110(d)) is required to: (i) Be registered in SAM before submitting its application; (ii) Provide a valid unique entity identifier (UEI) in its application; and (iii) Continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency. NOAA may not make a Federal award to an applicant until the applicant has complied with all applicable UEI and SAM requirements and, if an applicant has not fully complied with the requirements by the time NOAA is ready to make a Federal award, NOAA may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

Check that your institution is registered in the eRA Commons system. Registering with eRA Commons is a one-time process. If your organization is already registered in Commons because they have applied for or received grants from NIH, they don't need to register again. Process can take from 3-4 days to 4 months - do not wait till the last minute.

#### Indirect Cost Rate

If an applicant has not previously established an indirect cost rate with a Federal agency they may choose to negotiate a rate with the Department of Commerce or use the de minimis indirect cost rate of 10% of MTDC (as allowable under 2 C.F.R. §200.414). The negotiation and approval of a rate is subject to the procedures required by NOAA and the Department of Commerce Standard Terms and Conditions.

The NOAA contact for indirect or facilities and administrative costs is: Raishan Adams, Grants Officer, NOAA Grants Management Division, 1325 East West Highway, 9th Floor, Silver Spring, MD 20910 [raishan.adams@noaa.gov](mailto:raishan.adams@noaa.gov).

#### *Contact Information and LOIs Submission Information*

For questions related to the competition, please contact the Competition Manager, Lisa Vaughan at [Lisa.Vaughan@noaa.gov](mailto:Lisa.Vaughan@noaa.gov), with a copy to [noaa.adaptation.sciences@noaa.gov](mailto:noaa.adaptation.sciences@noaa.gov).

Administrative questions regarding the Notice of Federal Funding Opportunity (e.g. proposal formatting or submission guidelines) should be directed to Diane Brown ([diane.brown@noaa.gov](mailto:diane.brown@noaa.gov)).

### Letters of Intent (LOIs)

- Investigators are strongly encouraged to submit an LOI prior to developing and submitting a full proposal, however, they are not required. Investigators will be notified by the AdSci Program Competition Manager as to whether a full proposal is encouraged based on the LOI within four weeks of the LOI due date.
- Please submit LOIs through the AdSci LOI Google Form (<https://forms.gle/X8Cfvh8feMLuWtdQA>) by **11:59 pm Eastern Time on December 26th, 2023**.
- If you are unable to utilize this form for technical reasons, please email a copy to the AdSci Competition Manager, Lisa Vaughan ([Lisa.Vaughan@noaa.gov](mailto:Lisa.Vaughan@noaa.gov)) with a copy to [noaa.adaptation.sciences@noaa.gov](mailto:noaa.adaptation.sciences@noaa.gov) by the deadline. Principal investigators submitting a proposal in response to this AdSci competition announcement are required to follow the Letters of Intent (LOI) and Proposal preparation and submission guidelines described in the Adaptation Sciences FY 2024 Notice of Federal Funding Opportunity announcement.
- The following components are required if an LOI is submitted:
  - a. Competition Name.
  - b. A tentative project title.
  - c. Name(s) and institution(s) of the Lead Principal Investigator(s) and other Principal Investigator(s).
  - d. Email contact for the Lead Principal Investigator
  - e. Statement of the challenge to be addressed by the work.
  - f. Brief summary of work to be completed and methodology to be used
  - g. Potential (unfunded) collaborators/partners and beneficiaries of the work
  - h. Approximate cost of the project and time frame for the project.
  - i. Relevance to the Competition that is being targeted.

A response to the LOI from the Competition Manager (e-mail or letter) will be sent to the investigator within four weeks after the LOI due date encouraging or discouraging a full

application based on its relevance to the targeted competition. It is then entirely up to the investigator whether to submit a full application.