

Information Sheet

FY2023 NOAA/OAR/WPO/Social Science Program Competition

Social, behavioral, and economic science (SBES) is a critical component of meeting NOAA's mission. By finding, funding, and fostering high-quality and innovative SBES research, the Weather Program Office (WPO) Social Science Program (SSP) supports [NOAA's Research and Development \(R&D\) Vision Areas](#) (2020–2026) to integrate SBES into products, tools, and services that improve weather and air quality forecasting and societal outcomes. This program strongly encourages and supports SBES lead [interdisciplinary](#) work, applied research, and SBES research that advances theoretical findings into applications for the operational forecast community.

Elaboration of Science Emphases:

While there is growing interest in SBES research to improve forecast communication and develop specific products, there has been less focus on research-related infrastructure to collectively advance the needs of the research community and support SBES integration at the organizational level (See [NASEM, 2018](#)).

The SSP funding call intends to nurture SBES integration by focusing on methods, constructs, and the transfer of knowledge through research guided recommendations. SBES uses diverse methodologies, such as qualitative and quantitative data collection techniques, network analysis, and workshop methods, and more. Focusing on useable methods will help advance data collection to:

- Better understand forecaster collaborations, such as between local National Weather Service (NWS) Weather Forecast Offices and/or River Forecast Centers with NWS National Centers or among the [Unified Forecast System](#) modeling community.
- Better understand the definition (and related attributes) of effective Impact-Based Decision Support Services (IDSS), as well as understanding the needs of IDSS recipients and the socio-economic value of IDSS.
- Better understand how public(s) perceives weather risks and changes over time, for example.
- Better understand use of various graphical products and visual displays, such as: [Winter Weather Probability Graphics](#) (both for snow and/or freezing rain); [Experimental HeatRisk Product](#); [Experimental Graphical Hazardous Weather Outlook](#); [National Water Model information](#); [Experimental Flood Hazard Outlook](#); among others.
- Better understand how to convey uncertainty through verbal communication and language, for example, during flash flooding and/or snow squall wireless emergency alerts (WEA).
- Better understand how to convey and communicate weather risk and/or uncertainty through different scales, indices, categories, hazard naming systems, and risk and severity levels. Examples of scales and categories that are used to convey risk and/or uncertainty might include the following: [The Saffir-Simpson scale](#), [Space Weather scales](#), storm naming (for any hazard type), [Quantitative Precipitation Forecasts \(QPF\)](#), [Probabilistic Quantitative Precipitation Forecasts \(PQPFs\)](#), [Excessive Rainfall Outlook](#), and [Experimental Graphical Hazardous Weather Outlook](#).

- Better understand how to convey and communicate weather risk and/or uncertainty at different time scales. For example, this may include understanding how to communicate risk and uncertainty at longer time scales (e.g., Day 5, 6, and 7), or how best to communicate uncertainty and risk information around the timing of extreme weather when there are multiple rounds expected in a single day.

Additional Information on Proposal Evaluation and Submission:

Project Outputs

WPO's SSP recognizes projects have many possible applications and research outputs, such as providing research-guided recommendations, transferring methodologies, informing and/or creating a tool or technology, and using newfound knowledge to enhance a product or service. These applications may be relevant across the Weather Enterprise. However, Principal Investigators (PIs) should be aware that reviewers will examine the applicability and relevance of their proposed research to NOAA. Therefore, SSP encourages proposals to identify *all* possible research applications (e.g., for NWS, private weather industry, and/or other researchers), while focusing on primary research output(s) that may benefit NOAA.

Readiness Levels

Research projects appropriate for this funding call range from early applied research to mature stages of demonstration. This translates to lower and higher “readiness levels” (RLs), described in the WPO FY23 information sheet. RLs may be informed by the generalizability and the ecological validity of a particular project—or the extent to which research results can be extrapolated to the relevant population in real-world settings. For example, research projects may span different RLs depending on the relevancy of the research environment and sample size and quality. However, generalizability and ecological validity may be different for the various SBES methods and thus may apply RLs in a different manner. In addition to providing the RL, PIs are encouraged to indicate the appropriate R&D stage (i.e., research, development, and demonstration) in their proposal to further illustrate the maturity of the proposed project (see the [NAO 216-105B](#) and [handbook](#) for definitions). The SSP uses RLs to evaluate project maturity, *not* to judge the “correctness” of a PI RL assessment. The SSP recognizes that R&D takes time, and as such, we understand and do not expect projects to progress through all readiness levels in a two-year project period.

Note. SSP funded projects are not required to use a NOAA testbed unless its use is appropriate within the scope of the research methods.

Collaboration with the Weather Enterprise and Transition Plans

Previous WPO competitions encouraged PIs to collaborate with entities in the Weather Enterprise, particularly the NWS. This practice resulted in PIs including “letters of endorsement” along with their proposals. However letters of endorsement often led to unsuccessful and inadequate collaborative efforts. Therefore, *we discourage including letters of endorsement* for this competition. Instead, PIs are encouraged to include an investigator embedded within the operational components of the Weather Enterprise who may significantly contribute to the

project, where/if appropriate and feasible. While not required, NWS Weather Forecast Offices offer productive and valuable perspectives as collaborators in addition to NOAA and/or NWS Headquarter personnel (see Section IV.B of the WPO FY23 Funding Notice for information about NOAA federal collaborators).

Transition plans also help spur collaboration. Per the [NAO 216-105B](#), if the project has potential to progress beyond readiness level (RL) 4, the PI is expected to work alongside their designated NOAA/NWS Point of Contact to co-develop a transition plan within the first six months of the project period. For projects beginning at $RL > 4$, PIs are encouraged, but not required, to have an NOAA/NWS Operational Collaborator. For projects $RL < 4$, PIs are still encouraged to have an NOAA/NWS Operational Collaborator to consider the value of their R&D to operations.

SBES Data and Data Management

As stated in the Data Sharing Plan in the Notice of Funding Opportunity (section VI.B.), all data collected must be accessible to the general public, typically within two years. PIs can satisfy data sharing requirements by submitting socio-economic data to NOAA's National Center for Environmental Information (NCEI; see [NCEI Archive Collecting Policy](#)). Other data archiving platforms are available to PIs for data publishing and sharing, including (but not limited to) Converge/DesignSafe-CI and Harvard Dataverse. SSP highly recommends publishing *both* data and associated instruments, if appropriate.

SSP suggests that proposals include the following information in their Data Management Plan:

- Type of data to be collected and shared;
- Procedures for managing, storing, and maintaining the confidentiality of the data to be collected and shared;
- Roles and responsibilities of project or institutional staff in the management and retention of research data;
- Expected schedule and outlet for data sharing (no later than publication of findings in peer-reviewed publication or two years after the data are collected and verified);
- Format of the final electronic dataset;
- Documentation to be provided;
- Method of data sharing (e.g., NCEI, data archive, availability through the PI and/or PI's institution); and
- Any circumstances that prevent either all or some of the data from being shared. This includes data that may fall under multiple statutes and hence must meet confidentiality requirements for each applicable statute (e.g., data covered by Common Rule for Protection of Human Subjects, FERPA, and HIPAA).

Finally, applicants are strongly encouraged to use currently available data (e.g., publicly available datasets and/or data previously collected as part of a past research effort). However, principal and/or co-investigators may collect new data for their proposed project. Combining previously collected data with newly acquired data is also encouraged.

Additional information on Project Budgets and Timelines:

Project duration may not exceed two years; however, projects may have shorter timelines. For example, projects analyzing previously collected data may only require six months to a year, while research encompassing survey development, deployment, and analysis may require the full two year period. Multi-discipline projects are typically more costly, often by involving two or more PIs. Generally, single-discipline proposals are not expected to approach the grant ceiling (\$250K/project/year), while interdisciplinary collaboration may more easily justify budgets near the grant limit. PIs need to be aware that reviewers will closely examine the proposed budgets.

Office of Management and Budget (OMB) / Paperwork Reduction Act (PRA) Process

If an award recipient uses agency sponsorship in any collection of information from the public, the recipient must obtain Office of Management and Budget (OMB) clearance as required by The Paperwork Reduction Act (PRA) of 1995. For example, sponsorship may include NOAA disseminating surveys on behalf of award recipients, either directly or through a NOAA social media account. If a PI is unsure whether their project requires OMB clearance, the PI should budget ample time for clearance in their proposal and if awarded, NOAA staff can help determine whether OMB clearance is necessary. If a funded project is determined by NOAA to require OMB clearance, the award recipient will work with their operational collaborator/NWS point of contact (POC) and the NWS OMB PRA liaison (nws.pra@noaa.gov). The award recipient must obtain OMB clearance before collecting information. Because OMB clearance can take anywhere from one week to nine months, the process for obtaining OMB clearance should begin as soon as possible. For additional information on the OMB/PRA process, [please see the NWS Social Science vLab page](#).

Differences with other WPO Funding Opportunities:

Social science transcends all NOAA scientific missions and thus may have application to all WPO funding opportunities. However, not all research is suitable for SSP funding. SSP program priorities differ from other WPO Program priorities as they are not solely tied to emerging technologies or weather observing and modeling improvements. SSP science priorities require consideration of the human element, researching how people interact with current and future technologies, products, and services produced by the weather enterprise.

Letters of intent (LOI) are strongly encouraged for proposals submitted to this competition (see Section IV.B.1 of the WPO FY23 Funding Notice).

Competition Contact Information

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