



NATIONAL SCIENCE FOUNDATION
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Frequently Asked Questions (FAQs) for NSF 15-117, PREEVENTS

1. What makes PREEVENTS proposals different from those normally submitted to GEO programs?
2. How can I submit a PREEVENTS proposal?
3. Should the scope of PREEVENTS proposals be different from a typical single investigator or small collaborative proposal?
4. I have a proposal in for review right now that fits the PREEVENTS model. Should I contact my program officer to let them know?
5. Does every proposal have to incorporate some form of geoscience process study? For example, can a project address the impacts of an extreme event on "natural, social, and economic systems" without conducting research on the hazard itself?
6. The discussion of workshops references "cross-disciplinary areas that are not yet well established." What is meant by "not yet well established?"
7. What is meant by "subject to the limitations for the particular program(s)?" If the proposal is within the program scope what makes it a PREEVENTS proposal? If it's not within scope, will the program accept it?
8. Must every project address all three of the PREEVENTS goals listed in the DCL?
9. What is meant by the third PREEVENTS goal, to "enable development of new tools to enhance societal preparedness and resilience?"
10. The DCL states that NSF "intends to release a formal PREEVENTS solicitation in 2016." Should prospective PIs wait until the solicitation is issued or submit to an existing program?
11. For the purposes of PREEVENTS, what is a natural hazard? What does "resilience" mean?
12. Which natural hazards are of interest to PREEVENTS?
13. What is an "extreme event"?
14. Are PIs from the National Center for Atmospheric Research (NCAR) permitted to submit proposals to PREEVENTS?

1. What makes PREEVENTS proposals different from those normally submitted to GEO programs?

The Directorate for Geosciences (GEO) has long supported research applicable to natural hazards and extreme events. PREEVENTS is intended to enhance activities within existing GEO program that are relevant to the goals described in the [Dear Colleague Letter \(DCL\)](#). It also allows GEO to foster areas that may benefit from a broader approach than is easily accomplished through existing GEO programs, including multi-hazards and/or cascading hazards.

2. How can I submit a PREEVENTS proposal?

It is important to remember that PREEVENTS is in the initial implementation stages. At this time, proposals to pursue PREEVENTS science goals are only accepted through existing programs. Potential proposers should consult with program officers in the relevant area(s) about what

constitutes a good fit.

3. Should the scope of PREEVENTS proposals be different from a typical single investigator or small collaborative proposal?

A proposal should be appropriate in scope for the regular core program(s) to which it is submitted. In future stages of PREEVENTS, we anticipate there may be additional emphasis in cross-disciplinary areas or in areas for which a mix of resources might be used that goes beyond that typical in existing programs.

4. I have a proposal in for review right now that fits the PREEVENTS model. Should I contact my program officer to let them know?

Yes, contact your program officer and the PREEVENTS team at preevents@nsf.gov

5. Does every proposal have to incorporate some form of geoscience process study? For example, can a project address the impacts of an extreme event on "natural, social, and economic systems" without conducting research on the hazard itself?

The focus is on the fundamental science behind natural hazards and extreme events. Incorporating impacts of natural hazards and extreme events in terms of social and economic systems is encouraged but not required; for example, such impacts could be considered a broader impact for a proposal focused on a fundamental science question. You should consult with your program officer(s).

6. The discussion of workshops references "cross-disciplinary areas that are not yet well established." What is meant by "not yet well established?"

Please note that workshops can be within a discipline and/or cross-disciplinary. The phrase "not well established" means bringing together groups that have only occasionally interacted or have not traditionally worked together on issues focused on natural hazards and extreme events.

7. What is meant by "subject to the limitations for the particular program(s)?" If the proposal is within the program scope what makes it a PREEVENTS proposal? If it's not within scope, will the program accept it?

The scope of both the scientific project and the required resources should be appropriate for the program(s) to which a proposal is submitted. If a proposal is highly relevant to PREEVENTS but falls outside the scope of any existing programs, e.g. because of its interdisciplinary connections or its size, it may be more appropriate to wait for a future program opportunity in this area.

8. Must every project address all three of the PREEVENTS goals listed in the DCL?

The first goal is central to both PREEVENTS and the core programs and should be addressed in all proposals. The remaining two goals are long-term goals of PREEVENTS.

9. What is meant by the third PREEVENTS goal, to "enable development of new tools to enhance societal preparedness and resilience?"

It may be easiest to address this with an example. A project might "enable development of new tools" by providing information on earthquake or faulting processes that enable improved seismic hazards maps, but it would not generate the maps themselves such activities would be more appropriate for support by a related mission agency. Another project might provide fundamentally better knowledge of key parameters related to hurricane progression that would enable greatly

reduced errors in intensity forecasts. PREEVENTS would be focused on the improved knowledge, while the intensity forecasts themselves would be more appropriate for support elsewhere. In any case, topics addressed under this goal could be articulated in, and contribute to, the Broader Impacts section of a proposal.

10. **The DCL states that NSF "intends to release a formal PREEVENTS solicitation in 2016." Should prospective PIs wait until the solicitation is issued or submit to an existing program?**

If your idea would not fit with an existing GEO program that supports research on natural hazards and extreme events, it may be more appropriate to wait for a formal solicitation. Note that workshop proposals pursuant to the DCL may provide useful information for future PREEVENTS solicitations.

11. **For the purposes of PREEVENTS, what is a natural hazard? What does "resilience" mean?**

For "natural hazard" and "resilience", PREEVENTS uses the definitions found in the 2009 UNISDR Terminology on Disaster Risk Reduction published by the United Nations International Strategy for Disaster Reduction (UNISDR), Geneva, Switzerland (http://www.unisdr.org/files/7817_UNISDRTerminologyEnglish.pdf).

- **Natural hazard:** Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.
- **Resilience:** The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

PREEVENTS is focused on natural hazards and extreme events in the geosciences, and would not be an appropriate home for projects that are focused on deliberate or accidental events. Some hazards do span this boundary. For example, some natural hazards may trigger technological hazards and disasters, such as the cascading failure of the Fukushima nuclear plant caused by the 2011 Tohoku, Japan, earthquake and tsunami or a potential severe disruption of electrical grids by geomagnetic storms. However, many hazards would not be appropriate for study under PREEVENTS, including those originating from human-caused industrial accidents, purely technological events, or hazards related to war, acts of terrorism, and other malicious human activity.

12. **Which natural hazards are of interest to PREEVENTS?**

Any natural hazard related to areas of science of interest to GEO, which include but are not limited to:

- a. Coastal inundation, rapid erosion, and related processes
- b. Drought and flood
- c. Earthquakes
- d. Extreme heat waves
- e. Hurricanes, tornadoes, and other severe storms
- f. The occurrence of toxic algal blooms
- g. Landslides and other debris flows
- h. Space weather events
- i. Tsunamis
- j. Volcanic eruptions

k. Wildland fires

13. What is an "extreme event"?

The PREEVENTS Management Team has chosen not to adopt a strict definition of "extreme event", because such a definition depends strongly on the research topic or process being studied, as well as the spatiotemporal and intensity scales being used. Rather, we prefer to leave this to the expert judgment of GEO program officers for particular areas. However, some examples may be illustrative:

- Earthquakes happen on a daily basis around the United States, and thus an earthquake might not be considered an extreme event, but an M7 event in a populated area of the U.S. would be an extreme event.
- Thunderstorms are a daily occurrence, especially in the spring in the Midwest, and thus might not be considered extreme. However, some storms spawn tornadoes and other severe weather, which could be an extreme process.
- Sea level rise, on an annual scale, may not be considered an extreme event, but it exacerbates other extreme processes like hurricanes and storm surge. On the other hand, for processes on a centennial or millennial scale like the breakup of an ice sheet, sea level rise could be an extreme process.
- Drought is an annual occurrence in the United States, but severe droughts such as that in California and more generally across the Southwest might be considered extreme from a particular perspective.

14. Are PIs from the National Center for Atmospheric Research (NCAR) permitted to submit proposals to PREEVENTS?

Possibly, depending on a few factors: (1) NCAR's participation must be consistent with NCAR's mission; (2) participation is expected to be in partnership with non- FFRDC organizations; (3) funding requested by NCAR must be consistent with AGS guidelines to NCAR for proposal submissions; and (4) such proposals must be allowed under the terms of the solicitation(s) for the GEO program(s) to which the proposal would be submitted.