National Science Foundation
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Arlington, Virginia 22230

NSF 14-093

Frequently Asked Questions (FAQs) for Hazard SEES 2014/2015 Competition

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16. The solicitation requires a list of project personnel, a list of collaborators and individuals with conflicts of interest, and a spreadsheet that lists participating individuals and persons with whom they may have a conflict of interest. These seem redundant. Why are they all necessary?
17. How do we fill out the spreadsheet giving the List of Participating Individuals?

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1. **What is meant by interdisciplinary Hazards SEES research?**

   Proposals are expected to document that the proposed research is truly interdisciplinary and that the respective components are fully integrated and necessary for the successful execution of the proposed project. Plans for integration of the respective research components must be clearly outlined in the proposal. In order to ensure an interdisciplinary approach to solving sustainability problems, proposals must incorporate science from three or more intellectually distinct disciplines that in aggregate represent scientific areas supported by three or more of the participating NSF Directorates, which are:

   - Directorate for Geosciences;

- Directorate for Engineering;
- Directorate for Social, Behavioral, Economic Sciences;
- Directorate for Mathematical and Physical Sciences; and
- Directorate for Computer and Information Science and Engineering

A proposal that only integrates social psychology, economics, and computer science, for example, would not be suitable for this competition because the research only spans science supported by two directorates; social psychology and economics are both supported by the Directorate for Social, Behavioral, Economic Sciences. Similarly, a proposal that only integrates seismology, tsunami wave dynamics, and coastal engineering would not satisfy the requirements of this solicitation, because the Directorate for Geosciences supports research into both seismology and tsunami wave dynamics. An additional discipline, such as mathematics, that is supported by a third directorate would need to be added in order for this project to be suitable for the Hazard SEES competition. You are welcome to include more than three disciplinary dimensions in your proposals. You may also incorporate science from other disciplines not supported by the participating directorates as well (see question 2). The appropriateness of the research teams disciplinary composition and expertise will also be a factor in the merit review of the proposal as described in the NSF Merit Review Criteria section in the Hazards SEES solicitation.

2. **My project involves biological research. Would this project be appropriate for the Hazards SEES solicitation?**

   It depends. The biological sciences are not one of the distinct disciplinary areas described in this solicitation (except for marine systems which are included under ocean sciences in the Geosciences directorate). However, a biological or ecological component may fit into the research if appropriate to answer the overarching research questions. If you include a biological science, your proposal must still also incorporate science from three of the directorate-level discipline areas listed above (see question 1). The key is to craft a compelling argument that is in the full spirit of the solicitation.

3. **Can I obtain a waiver of the page limitation for the project description if my project is large and complex, or if my project is a large collaboration among multiple institutions?**

   No. All proposals must adhere to the page limit given in the solicitation.

4. **Do all proposals require a Data Management Plan? Do all proposals require a Management and Integration Plan as well?**

   Yes, all Hazards SEES proposals require both. The proposal must include a section that describes data and model sharing plans (Data Management Plan) in the Supplementary Documents section of the proposal as described in the NSF Grant Proposal Guide and in the Proposal Preparation Instructions section of the Hazard SEES solicitation. If you anticipate that your proposed project would not generate data or samples that require management and/or sharing, please state that in your Data Management Plan (but note that this statement will be subject to peer review). The proposal must also include, in the Supplementary Documents section of the proposal, a Management and Integration Plan, which is also described in the Proposal Preparation Instructions section of the Hazard SEES solicitation. The Management and Integration Plan differs significantly from the Data Management Plan, as discussed in the solicitation. The quality and appropriateness of the Management and Integration Plan is an important review criterion for Hazards SEES proposals as outlined in the NSF Merit Review Criteria section of the Hazards SEES solicitation.

5. **Can a researcher be involved in more than one Hazards SEES proposal?**

An individual can appear in the budget (including subaward budgets) for only one proposal. An individual can be involved in multiple proposals as an unfunded collaborator.

6. **The solicitation uses a lot of terms such as vulnerability, resilience, hazards, and disasters. Would you please define these?**

   Definitions of these terms can be found in *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).

   - Disaster: A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.
   - Hazard: A dangerous phenomenon, substance, human activity or condition 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.
   - 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.
   - Vulnerability: The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

7. **What is the difference between natural hazards, technological hazards, and technological hazards linked to natural phenomena?**

   The focus of the Hazards SEES program is natural hazards and technological hazards linked to natural phenomena, and their interactions. Such interactions are reciprocal. First, technological hazards originating in human activity may significantly impact natural systems. The Deepwater Horizon Oil Spill in 2010 is an example of technological hazard linked to natural phenomena. Human error led to the release of oil into the Gulf of Mexico, which damaged the oceanic and coastal ecosystems upon which many coastal towns and industries depend. Second, natural hazards, such as earthquakes and hurricanes, may precipitate technological disasters. The earthquake and tsunami that impacted the nuclear plant in Fukishima, Japan in 2011 is an example. However, many technological hazards are entirely contained within the social and technological realm (e.g., financial system meltdowns), and absent some significant impact on natural phenomena, such hazards are beyond the purview of the Hazards SEES program. Hazards originating from war, acts of terrorism, and other malicious human activity (e.g., criminal acts, sabotage) are also beyond the scope of Hazards SEES. In order to be suitable for the Hazards SEES program, proposals must address hazards related to at least one natural phenomenon.

8. **Which natural hazards are of interest to the Hazards SEES program?**

   The U.S. National Science and Technology Council Subcommittee on Disaster Reduction (SDR) publication Grand Challenges for Disaster Reduction includes a set of Implementation Plans for various natural hazards, which provide further definitions and descriptions of these hazards. Research projects that would fit within the scope of Hazards SEES include, but are not limited to, those related to these hazards:

   - Coastal Inundation (http://www.sdr.gov/docs/185820_Coastal_FINAL.pdf)

- Drought (http://www.sdr.gov/docs/185820_Drought_FINAL.pdf)
- Earthquake (http://www.sdr.gov/docs/185820_Earthquake_FINAL.pdf)
- Flood (http://www.sdr.gov/docs/185820_Flood_FINAL.pdf)
- Heat Wave (http://www.sdr.gov/docs/185820_Heatwave_FINAL.pdf)
- Hurricane (http://www.sdr.gov/docs/185820_Hurricane_FINAL.pdf)
- Landslide and Debris Flow (http://www.sdr.gov/docs/185820_Landslide_FINAL.pdf)
- Space Weather (http://www.sdr.gov/docs/185820_Space_FINAL.pdf)
- Tornado (http://www.sdr.gov/docs/185820_Tornado_FINAL.pdf)
- Tsunami (http://www.sdr.gov/docs/185820_Tsunami_FINAL.pdf)
- Volcano (http://www.sdr.gov/docs/185820_Volcano_FINAL.pdf)
- Wildland Fire (http://www.sdr.gov/docs/185820_Wildfire_FINAL.pdf)
- Winter Storm (http://www.sdr.gov/docs/185820_Winter_FINAL.pdf)

9. **Can a Hazards SEES project involve international research? Can a project have international collaborators?**

   Hazards SEES projects can involve international research. Hazards and disasters research has natural linkages with international partners thus international collaborations are encouraged where appropriate. International collaborators, however, must seek support from their respective funding organizations, and not NSF. Funding guidelines for involving international collaborators (see Budgetary Information section of the Hazards SEES solicitation) allow only the following expenses to be included in the NSF budget: 1) Travel expenses for U.S. scientists and students participating in exchange visits integral to the project; 2) Limited project-related expenses for international partners to engage in research activities while in the United States as project participants; 3) Project-related expenses for U.S. participants to engage in research activities while abroad.

10. **How do I decide if my proposal should be submitted to Hazards SEES or another SEES (or SEES-like) program, such as Coastal SEES or the Dynamics of Coupled Natural and Human Systems?**

    The overarching goal of Hazards SEES is to catalyze well-integrated interdisciplinary research efforts in hazards-related science and engineering in order to improve the understanding of natural hazards and technological hazards linked to natural phenomena, mitigate their effects, and to better prepare for, respond to, and recover from disasters. It is up to the PI to make a compelling case for their project and how well it fits the particular goals of any NSF solicitation. Please read the program solicitations carefully in order to select an appropriate program for any given project.

11. **How I should handle NSF facility costs in the proposal?**

    NSF facilities are often in high demand and allocation decisions are made well in advance of facility usage. Proposers should consult facility managers and relevant NSF program officers to discuss options for requesting the use of a facility as far in advance of the proposal submission date as possible. In general, proposers will have to adhere to the established scheduling guidelines of the individual NSF facility.

    As stated in the main text of the solicitation, projects that are requesting NSF computational facilities and/or observational platforms and facilities must include a copy of their request for facility support among the supplementary documents. The document must include a cost estimate for the use of the facility, which should be based upon consultation with the facility manager. When preparing your proposal, do not include these costs in the standard NSF budget form. Costs for NSF facilities would be allocated separately if your proposal is supported. However, please remember that the facility costs will count against the $3,000,000 cap for proposal budgets. For example, if you are planning on submitting a proposal that includes a facility cost of $500,000, your

proposal budget should be no larger than $2,500,000.

12. **Are PIs from NCAR permitted to submit proposals to Hazards SEES?**

PIs from the National Center for Atmospheric Research (NCAR), an NSF-sponsored FFRDC, are permitted to submit proposals to Hazards SEES subject to certain conditions: (1) NCAR's participation must be consistent with the NCAR mission of enabling or fostering focused new community research; (2); participation is expected to be in partnership with non-FFRDC organizations; and (3) funding requested by NCAR must be consistent with the Atmospheric and Geospace Sciences (AGS) divisions guidelines to NCAR for proposal submissions (for guidelines consult the AGS website http://www.nsf.gov/div/index.jsp?org=AGS).

13. **Can PIs from a Federal lab (FFRDC) submit a proposal to Hazards SEES?**

Proposals from non-NSF-sponsored FFRDC's will not be accepted in the Hazards SEES program. However, investigators from non-NSF-sponsored FFRDC's may participate as unfunded collaborators in a Hazards SEES proposal.

14. **I would like to include undergraduate students in my project. How do I incorporate a Research Experiences for Undergraduates (REU) supplement request within my proposal?**

Incorporation of an REU supplement request within a proposal is an effective mechanism to integrate undergraduate educational activities into a research project. The Research Experiences for Undergraduates (REU) solicitation (NSF 13-542) describes this mechanism in detail. The REU solicitation notes that support for undergraduate students involved in carrying out research under NSF awards should be included as part of the research proposal itself instead of as a post-award supplement to the research proposal. Consult the REU solicitation for further details.

15. **I won't be able to prepare a proposal this year. Can I count on Hazards SEES having another competition next year?**

No.

16. **The solicitation requires a list of project personnel, a list of collaborators and individuals with conflicts of interest, and a spreadsheet that lists participating individuals and persons with whom they may have a conflict of interest. These seem redundant. Why are they all necessary?**

These lists do provide overlapping information, but unfortunately, technical limitations on systems used to manage and process proposals make it infeasible for a single document to serve all intended uses of these documents. In particular, there is no way to submit a spreadsheet via FastLane, and we need the spreadsheet in order to effectively manage conflicts of interest during this complex competition.

17. **How do we fill out the spreadsheet giving the List of Participating Individuals?**

The spreadsheet must be filled out as plain text, in CSV format. The submitted file may not contain any additional formatting such as carriage returns, splitting items across multiple cells, extra spaces/columns, etc. Any such change will interfere with our automated handling of these files.

The following is an example of a CSV file for a project with three PIs, two of whom have four conflicts of interest and one of whom has three. One of the conflicts is common between two of the PIs. Given the following information:

- Proposal ID Number: 1512345
- PI: Joan Doe from University of State
  - Conflict: George Jones from University of X
  - Conflict: Fred Bloggs from College of Y
  - Conflict: Jane Public from City of Place
  - Conflict: Mario Rossi from Company A
- Co-PI: Jean Dupont from College of B
  - Conflict: Julius Caesar from University of XYZ
  - Conflict: Timothy N. Chanter from ABC University
  - Conflict: John Donne from Company B
  - Conflict: Jane Eyre from Quadrinity College
- Co-PI: W. Jack Smith from MTX Tech
  - Conflict: Mario Rossi from Company A
  - Conflict: Tom Anderson from CC University
  - Conflict: Hans Gauss from JKL Technical College

The lines in the CSV file providing the conflicts information should read as follows:

COI_List>,1512345,Doe,Joan,University of State,Jones,George,University of X
COI_List>,1512345,Doe,Joan,University of State,Bloggs,Fred,College of Y
COI_List>,1512345,Doe,Joan,University of State,Public,Jane,City of Place
COI_List>,1512345,Doe,Joan,University of State,Rossi,Mario,Company A
COI_List>,1512345,Dupont,Jean,College of B,Caesar,Julius,University of XYZ
COI_List>,1512345,Dupont,Jean,College of B,Chanter,Timothy N.,ABC University
COI_List>,1512345,Dupont,Jean,College of B,Donne,John,Company B
COI_List>,1512345,Dupont,Jean,College of B,Eyre,Jane,Quadrinity College
COI_List>,1512345,Smith,W. Jack,MTX Tech,Rossi,Mario,Company A
COI_List>,1512345,Smith,W. Jack,MTX Tech,Anderson,Tom,CC University
COI_List>,1512345,Smith,W. Jack,MTX Tech,Gauss,Hans,JKL Technical College