CALL FOR PROPOSALS

To:
Columbia University Faculty
Columbia University Research Scientists
Columbia University Research Scholars
Columbia University Postdoctoral Scientists and Scholars

Award amounts: $5,000 - $25,000 total per project, for two years
Proposal deadline: Monday, September 14, 2020
Award notification: Tuesday, December 1, 2020
Call for Proposals

Earth Frontiers is a seed-funding program of the Earth Institute that welcomes proposals from Columbia University faculty and researchers. The purpose of the program is to support the development of new interdisciplinary projects that capitalize on the breadth of expertise of the University to produce new knowledge, and in some cases, formulate, disseminate, and, if practical, implement science-based solutions and policies to pressing sustainability problems.

The Earth Institute is seeking proposals for the development of interdisciplinary projects that show promise in making meaningful and tangible contributions in the following areas.

- **Decarbonization**: decarbonization of energy, manufacturing, transportation, agriculture and land use, the development of energy storage, negative emissions, energy savings.
- **Future climate and climate adaptation**: getting a more accurate estimate of what is likely or possible in future in terms of climate change and its consequences (e.g. sea level change), and living with the effects of climate change, extreme events and climate variability.
- **Stewardship of the planet**: e.g. responsible governance and use of the oceans, biosphere and natural resources.
- **Sustainable living**: urbanization, sustainable development, investment, and management, circular economy, public health, food systems, peace and security.
- **Restless earth**: relief and preparedness for natural disasters such as earthquakes, tsunamis and volcanic eruptions.
- **Earth fundamentals**: how Earth-like planets work and what is required for habitability.

The Institute is especially interested in seeding novel research projects that bring together researchers from across the University, in engineering disciplines, novel technologies, the humanities, ecology, biodiversity and plant science, economics and social sciences, public health, the arts, glaciology, satellite observations and coastal processes, decision making and policy, extra-terrestrial planetary climate and habitability, law and data science.

Proposals that combine both research and practice are welcome, as both activities are central to the Earth Institute. Practice must be grounded in Columbia University’s basic and applied research in sustainability, thus bringing the most advanced knowledge base to the field, the ultimate test bed for theories and hypotheses developed in the research environment of the Earth Institute.

For additional information, contact Gabriella Cohen (gcohen@ei.columbia.edu, 212-854-0418).

**Awards and Funding Guidelines**

The Institute normally will award grants of up to $25,000 per project, per year, for a period of one or two years. The Earth may stipulate changes to any proposal as a requirement for funding. The Institute may also, at its discretion, award less money than was originally requested by a project team. Project teams are required to provide a brief progress report ten months into the first year of the project, and a final report six weeks after the completion of the second year of the project. PIs may send reports electronically to Gabby Cohen (gcohen@ei.columbia.edu).

Funding for the second year of each project will be at the discretion of the Earth Institute and will be contingent upon the successful completion of the first year of each project, as well as the extent to which PI’s can leverage additional funding for the project, including overhead or its equivalent, from
others. Any overhead that the project generates will accrue to the Earth Institute.

All Earth Institute funds must remain within Columbia University except for products and services explicitly outlined in the proposal budget (i.e. consultants). Non-Columbia University co-PIs cannot be compensated with Earth Institute funds for their effort.

Any unspent funds must be returned to the Earth Institute at the close of a project unless written approval has been granted to extend the award past the project’s end date. No-cost extensions must be requested at least one month prior to the project close date.

**Evaluation criteria**

The evaluation of project proposals will be based on the following:

1. the extent to which projects reflect the mission of the Earth Institute and its priorities;
2. the interdisciplinary nature of the project team;
3. the potential to scale up, producing important new knowledge, or forging solutions that have an impact on people’s lives;
4. the opportunity to involve Earth Institute postdoctoral fellows and students on project teams;
5. the amount of matching funds and in-kind contributions;
6. the engagement of partners or stakeholders within or outside the scientific research community;
7. the expected outcomes of the project, including the potential for future funding.

The following criteria will also be considered by the Earth Frontiers steering committee:

- strength of proposal concept
- creativity
- team management and communication plan
- legacy

**Eligibility and Composition of Project Team**

Funding is only available for projects in which a member of the Columbia University (CU) community is the Principal Investigator (PI).

- Normally, the lead PI is expected to be a full-time Columbia University officer of instruction or officer of research of higher rank than postdoctoral researcher. A postdoctoral research scientist or scholar may be the PI of a project as long there is as co-PI of higher rank, who signs an agreement to assume responsibility of the project if the postdoctoral researcher departs Columbia before the completion of the project. The dates of the postdoctoral research scientist’s appointment term must be included in the proposal. Postdoctoral researchers may be listed as co-PIs without a signed agreement.

- Individuals who have adjunct appointments may only be listed as co-PIs in the proposal.

- There can be up to four co-PIs per proposal. Co-PIs need not be members of the Columbia University community. There is no limit to the number of project team members.
• The project team will ideally comprise a mix of senior and junior scientists and scholars, including Earth Institute postdoctoral researchers, and graduate and undergraduate students. The team may include collaborators outside of Columbia University.

• A project that receives funding from the Earth Frontiers program is an Earth Institute project and will remain so regardless of changes in project leadership.

Proposal Format

The proposal should include the following documents:

• New Project Proposal Coversheet (below).
• Project Description comprising up to five pages covering the information outlined below. Only the first five pages of the Project Description will be considered.
• Two-page CVs for each the PIs and co-PIs.
• References (up to one page).
• Budget and budget justification, which accounts for any matching funds and in-kind contributions (up to 2 pages).
• The only appendices should comprise letters of support.
• All proposals must be submitted as a letter sized PDF and written in 12-point Times font with one-inch margins, with the exception of references that can be in 11-point font.

Project Description

Title of Project

Abstract (200 words maximum)

Scope of Project (half page maximum)
This section should include the project title and a description of the goals and objectives of the project, as well as a discussion of how the project reflects the mission of the Earth Institute and its research priorities.

Methodology

This section should lay out the basic project plan. The plan should include the hypotheses being tested and the experimental design used to test them, including the data collection and analysis methods. PIs must discuss why the proposed research methods are the most appropriate relative to alternative approaches.

It is required that PIs provide letters of support, or other documentation, from data sources to confirm access to any data needed. If the project proposes to develop a new tool or modify an existing one, PIs should articulate the rationale and clearly state the methods, with supporting references, for developing these tools.
Names and Titles of Contributors and their Role in the Project
This section should identify the project team and any collaborators, as well as provide a brief description of what specific activities each member of the team will conduct. A list of existing collaborations within the Earth Institute, and Columbia University more broadly, related to this project should be provided here.

Project Partners and Fieldwork
This section should clearly identify the project partners and any fieldwork sites. It is required that these all be identified before the start of the project. The section should also describe the project team’s prior experience, if any, working with the partners listed and in the proposed locations.

Impact, Potential for Scaling-up & Matching funds,
The section should clearly identify the project’s expected impact on the field and on people’s lives. In addition, this section should include a discussion of the potential of the project to scale-up and strengthen its impact. This discussion should include the project team’s plans for leveraging additional funding for the project, including overhead, from others. Questions that PI’s must address are:

1) How will you develop this project in the future? Be as specific as possible.
2) How will you leverage this seed funding to raise external funding? Be as specific as possible.

Project Timeline
This section should describe the timing of the project plan and anticipated project milestones during the two-year project period. PIs are also required to provide a written progress report ten months into the first year of the project. The report should indicate progress toward milestones and any unanticipated difficulties, as well as provide information on the extent to which PI’s have or expect to raise additional funding for the project, including overhead or its equivalent, from others.

Project Management and Communication Plan
This section should describe how you will manage the project and team to ensure the success of your project. It also should include how you will communicate your outcomes to the intended audience.

Required Equipment and Approvals
It is required that letters of intent, endorsement and commitment from partners be acquired prior to the start of the project. These should be included as Appendices. The proposal should list any approvals necessary for project initiation (e.g. Institutional Review Board). Projects will not be funded until all necessary approvals have been obtained. This section should also describe the equipment to be used and should state and justify the need for any new equipment. Seed funding can be used to purchase software if needed, but cannot be used to purchase new computers.

Deadlines

Proposal Submission
Proposals must be received electronically by 12 noon, on September 14, 2020, to gcohen@ei.columbia.edu.
Late submissions will not be considered.

Award Notification
Award notifications will be made by December 1, 2020
Project Proposal Coversheet

This is a proposal for a project that would begin on January 1, 2021 and which would end no later than December 31, 2022. Funding for the second year of each project will be at the discretion of the Earth Institute and will be contingent upon the successful completion of the first year of each project, as well as the extent to which the PI’s leverage additional funding for the project, including overhead, from others. The Earth Institute will determine whether to fund the project for a second year based on a progress report due on November 1, 2021. A final report is due by February 15, 2023.

**Project Title**

**Principal Investigator**
- **Name:**
- **Title:**
- **Organization/Department:**
- **Work Phone:**
- **E-mail:**

**Project Contact (if different from PI)**
- **Name:**
- **Title:**
- **Organization/Department:**
- **Work Phone:**
- **E-mail:**

**Funding request:**

**Total expected project budget:**