



United States – Israel
Binational Science Foundation

5 February 2022

CALL FOR PROPOSALS

CROSS-DISCIPLINARY RESEARCH TOWARDS CLIMATE SOLUTIONS

Preproposal deadline: 3 April 2022

Full proposal (by invitations only) deadline: 1 August 2022

Outline of program Climate change is without a doubt the most pressing issue of our time. With the clock running out on global CO₂ and other greenhouse gas emissions, humanity struggles to contain global temperature rise at no more than 2°C as compared to preindustrial levels. Present day we experience climate change everywhere and there is a clear need for action. The US-Israel Binational Science Foundation (BSF) contends that real world climate solutions will not emerge from a single discipline. The design and successful implementation of true solutions requires transformative concepts that run across disciplines with attributes like discovery, application, engineering, implementation, behavioral change and societal acceptance. With these ingredients at the basis of successful development of novel technologies and approaches, they can drive political will and new policies towards mitigating climate change.

The US-Israel BSF aims to make a positive contribution to the development of **climate solutions through cross-disciplinary, collaborative research projects** between the two countries. This initiative envisages a bi-annual call for cross-disciplinary proposals that advance the conceptualization, development and/or implementation of climate solutions. The new initiative will focus on how aspects of climate related processes can be offset by novel technologies, regulations, policy etc. Examples of such processes are:

1. **Atmosphere** (e.g. carbon dioxide capture, methane emissions, hurricane preparedness, climate change, extreme weather etc.)
2. **Earth** (salt intrusion; rivers, estuaries and marshlands; coastal erosion; droughts; arid ecosystems; alternative energy sources (wind, solar); deforestation etc.)
3. **Ocean** (alternative energy sources (tidal, wave); coral bleaching; biodiversity and biogeography; food web structures; ocean acidification etc.)

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Call for Preproposals BSF invites 5-page preproposals of cross-disciplinary, US-Israel collaborative studies that develop transformative concepts and ideas towards climate solutions. These ideas/concepts address the impacts of climate change on the natural environment as well as on human populations, their distributions and economic activities. Preproposals that do not describe a collaboration across **at least two major disciplines** will be returned without review. Definitions of key principles of this Call for Proposals:

- **Transformative research** is driven by ideas that have the potential to radically change our understanding of a central scientific concept (in this case climate change), leading to new applications, technologies and/or policies.
- **Cross-disciplinary** refers to major disciplines, for example Physics, Engineering and Social Sciences.
- **Climate solutions** refers to novel technologies, approaches and/or policies that incorporate contributions from said major disciplines and have the potential to make a significant contribution to climate change mitigation.

This call for preproposals is inclusive of all programs that are eligible for BSF funding does not invite studies that address topics of agricultural interest. Latter topics fall within the funding realm of BSF's sister foundation, US-Israel BARD.

Program guidelines:

1. The format of the 5-page preproposals is as follows:
 - a. Full title plus names of PIs and their affiliation;
 - b. Short scientific background and definition of the climate challenge to be addressed;
 - c. Description of the transformative idea/concept that will lead to a climate solution;
 - d. Objectives; workplan, distribution of tasks;
 - e. Timeline and expected milestones, mode of collaboration;
 - f. Maximum of 10 references;
 - g. Tentative budget + justification

Preproposals that exceed the maximum length of five pages or do otherwise not conform with the requirements listed, will be returned without review. BSF anticipates 20-30 preproposals from which a maximum of 8 will be invited to submit a full proposal. For detailed instructions on preproposal preparation and submission see [here](#).

2. Full proposals will be prepared according to the format and guidelines that apply to the traditional [BSF research proposals](#). The submission deadline for full proposals is 1 Aug 2022. BSF anticipates making two grants towards 3-4 years projects each cycle with award amounts of maximum \$150K per project per year (up to \$600,000 per project).



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Please pay close attention to the following:

3. (Pre)proposals will be evaluated first and foremost on the transformative nature of the scientific approach and potential to impact climate mitigation. BSF welcomes proposals that are non-conventional and/or high risk.
4. Applications must be submitted jointly by at least one Israeli and one American scientist and together the PIs will represent different major disciplines.
5. Principle investigators must be affiliated with an academic institution, academic hospital, not for profit research organization or government research institution that meets the BSF eligibility criteria.
6. BSF welcomes the participation of industry partners but they can not act as lead PI and they cannot request funding.
7. All scientific and financial aspects of grants will be managed by the institutions of the PIs who participate in the application.
8. Full proposals will be sent out for external review worldwide after which they are evaluated and ranked by an expert panel. Whereas BSF explicitly requests confidentiality and avoidance of conflicts of interest, the Foundation cannot guarantee the proprietary nature of proposals.
9. Proposal evaluation will be managed by an expert panel that will make funding recommendations, but the final decision for funding lies with the BSF Board of Governors.
10. BSF allow grantees in this special program to also hold a regular BSF or NSF-BSF award. PIs are welcome to submit proposals to the regular programs that explore topics that are complementary to ones entertained for their climate solutions studies.
11. Unless specifically invited by BSF, applicants whose (pre)proposals were declined cannot resubmit the same (pre)proposal in following years, also not when they change one or more PIs.
12. Both preproposals and full proposals are submitted via the BSF on-line submission system by the respective due dates: unsolicited preproposals by 1 April 2022; invited full proposals by 1 August 2022.
13. Award/decline decisions are expected by 1 December 2022.