



NATIONAL SCIENCE FOUNDATION  
2415 EISENHOWER AVENUE  
ALEXANDRIA, VIRGINIA 22314

NSF 22-025

## Dear Colleague Letter: Opportunities for Research and Education in the Critical-Zone (ORE-CZ)

---

December 7, 2021

Dear Colleagues:

With this Dear Colleague Letter, the National Science Foundation (NSF) Division of Earth Sciences (EAR) within the Directorate for Geosciences (GEO) together with the Division of Human Resources Development (HRD) in the Directorate for Education and Human Resources (EHR) announce an intent to expand the breadth of researchers investigating the dynamics and processes within Earth's Critical Zone (CZ), the region that ranges from the weathered bedrock beneath the soil profile up to the top of the vegetation canopy. The recent consensus study report from the National Academy of Science, Engineering and Mathematics (NASEM), *A Vision for NSF EAR 2020-2030: Earth in Time*, recommended that EAR encourage exploration of the Critical Zone "to advance knowledge of water, carbon, and nutrient cycles; landscape evolution and hazards prediction; and land-climate interactions." NSF currently supports these goals through several Thematic Clusters as part of the Critical-Zone Collaborative Network (CZNet; [NSF 19-586](#)); this announcement is intended to enable other investigators to develop complementary approaches to answer fundamental questions concerning Critical-Zone function. This same NASEM report recommends that the Division of Earth Sciences "enhance its existing efforts to provide leadership, investment, and centralized guidance to improve diversity, equity, and inclusion within the Earth science community." An increase in the community of Critical-Zone researchers provides an opportunity to advance this effort.

This DCL is intended to make significant progress in advancing the following goals:

1. Encourage submission of proposals from minority-serving institutions (MSI), primarily undergraduate institutions (PUI), non-R1 institutions, early-career researchers or others who are not currently part of CZNet.
2. Develop education or outreach programs that are oriented towards increasing the involvement of faculty and students from underserved communities.
3. Enhance partnerships and collaboration with the current CZNet Thematic Clusters or

leverage existing infrastructure of CZNet. Information about the current Critical-Zone awards can be found [at the NSF Critical Zone Collaborative Network web site](#) and at [criticalzone.org](http://criticalzone.org).

Proposals submitted in response to this DCL should be prepared in accordance with the [NSF Proposal and Award Policies and Procedures Guide](#) (NSF 22-1) and submitted to a NSF disciplinary program in the Division of Earth Sciences (EAR): [Programs | NSF - National Science Foundation](#). Please contact an NSF Program Officer, including those listed below, to identify the program(s) most germane to the proposed topics. Proposal titles should begin with "ORE-CZ:" followed by an appropriate descriptor; proposal budgets are limited to \$200,000. EAR disciplinary programs have no deadlines and proposals may be submitted at any time, but proposals for this special opportunity must be submitted no later than **April 30, 2022**.

Sincerely,

Alexandra R. Isern, Assistant Director for Geosciences

Sylvia M. Butterfield, Assistant Director (Acting) for Education and Human

#### **Program Officer Contacts:**

Richard Yuretic, [ryuretic@nsf.gov](mailto:ryuretic@nsf.gov), 703-292-4744

Julie Pett-Ridge, [jpettrid@nsf.gov](mailto:jpettrid@nsf.gov), 703-292-2613

Jonathan Wynn, [jwynn@nsf.gov](mailto:jwynn@nsf.gov), 703-292-4725

Hendratta Ali, [heali@nsf.gov](mailto:heali@nsf.gov), 703-292-2468

Justin Lawrence, [jlawrenc@nsf.gov](mailto:jlawrenc@nsf.gov), 703-292-2425