



NOTICE OF INTENT TO AWARD

This Funding Announcement is not a request for applications. This announcement is to provide public notice of the U.S. Geological Survey's intention to fund the following project activities without full and open competition.

ABSTRACT	
Funding Announcement	USGS-20-FA-0022
Project Title	NexView: Interdisciplinary modeling and visualization to support resource decision making in the Lower Mekong River Basin
Recipient	Arizona State University
Anticipated Federal Amount	\$716,659.00
Cost Share	N/A
Total Anticipated Award Amount	\$716,659.00
New Award or Continuation?	New award
Anticipated Period of Performance	March 15, 2020 through March 14, 2021
Award Instrument	Cooperative Agreement
CFDA # and Title	15.808 – Research and Data Collection
USGS Point of Contact	Matthew Andersen (mandersen@usgs.gov); Sara Roser (sroser@usgs.gov)

OVERVIEW

Local and national governments in the Lower Mekong River Basin, as well as community groups and individuals, are disadvantaged by lack of understanding of interactions among natural and social resources in the face of development pressures. This project, NexView, aims to increase the availability and utility of earth system and institutional data by increasing their availability, and increasing the understanding of interaction among these resources, in support of improved decision making for resource management. NexView aims to visualize data in a dynamic environment where stakeholders can use pre-loaded models and data to manipulate parameters to construct and visualize interactions and impacts leading to more desirable resource futures for people.

This project is designed to gather existing data and models, collect additional new data, assemble new models of important resource relationships, and visualize the model results for the short-term benefit of nations of the Lower Mekong River Basin that are struggling with competing demands on resources and the impacts on people. With increased clarity about the relationships between resources and local people, local managers will be able to set specific goals and implement specific strategies to help sustain important resources for current and future residents.

RECIPIENT INVOLVEMENT

Arizona State University will:

- Focus on building remote sensing models of natural resources;
- Use all available models from multiple sources to build a large, integrated, interdisciplinary model of many resources (the NexView model) which they will display in their Decsion Theater (DT) format. The DT is a combination of hardware, technology capabilities (e.g., Team Science, Decision Science, software development/data analytics/graphic artists/project management, etc.), and specific topic subject matter expertise, all working in combination with one another; and
- Develop and deliver online training modules to help build the capacity of people in the Mekong region capacity in quantitative modeling of natural resources.

USGS INVOLVEMENT

Substantial involvement on the part USGS is anticipated for the successful completion of the objectives to be funded by this award. In particular, USGS will be responsible for the following:

- Building groundwater and socioeconomic models for this project;
- Coordinating with the Mekong River Commission Secretariat; the US Army Corps of Engineers; and the NGO Pact (pactworld.org)
- Conduct groundwater sampling field work; and
- Organize project workshops.

SINGLE-SOURCE JUSTIFICATION

DEPARTMENT OF THE INTERIOR SINGLE SOURCE POLICY REQUIREMENTS
Department of the Interior Policy (505 DM 2) requires a written justification which explains why competition is not practicable for each single-source award. The justification must address one or more of the following criteria as well as discussion of the program legislative history, unique capabilities of the proposed recipient, and cost-sharing contribution offered by the proposed recipient, as applicable.

In order for an assistance award to be made without competition, the award must satisfy one or more of the following criteria:

- (1) Unsolicited Proposal – The proposed award is the result of an unsolicited assistance application which represents a unique or innovative idea, method, or approach which is not the subject of a current or planned contract or assistance award, but which is deemed advantageous to the program objectives;
- (2) Continuation – The activity to be funded is necessary to the satisfactory completion of, or is a continuation of an activity presently being funded, and for which competition would have a significant adverse effect on the continuity or completion of the activity;
- (3) Legislative intent – The language in the applicable authorizing legislation or legislative history clearly indicates Congress' intent to restrict the award to a particular recipient of purpose;
- (4) Unique Qualifications – The applicant is uniquely qualified to perform the activity based upon a variety of demonstrable factors such as location, property ownership, voluntary support capacity, cost-sharing ability if applicable, technical expertise, or other such unique qualifications;
- (5) Emergencies – Program/award where there is insufficient time available (due to a compelling and unusual urgency, or substantial danger to health or safety) for adequate competitive procedures to be followed.
- (6) Cooperative Agreements - USGS Unique Authority cited at 43 U.S.C. 36d (Federal, State, and academic partners) or DOI Authority cited at 43 U.S.C. 1457b (not-for-profit organizations).

USGS did not solicit full and open competition for this award based the following criteria:

(4) UNIQUE QUALIFICATIONS

(6) COOPERATIVE AGREEMENTS - USGS Unique Authority cited at 43 U.S.C. 36d

Single Source Justification Description:

(4) Unique Qualifications:

Arizona State University has pioneered a unique tool in the emerging science of decision support, the DT. Superficially the DT is simply a small round theater with monitors mounted around 180° of the circle. Running the theater, however, requires advanced models supported by substantial data and advanced coding to visualize model run results that can be manipulated in real time by participants in the theater or participating remotely. ASU has installed DTs at the home campus in Tempe, Arizona, and in Washington, DC. ASU has brought the DT capacity to Viet Nam by bringing the necessary computational capacity to Ho Chi Minh City, demonstrating that the DT can be relatively mobile, providing the fundamental infrastructure is present. The capacity for building and operating the DT, both in the United States and in the Lower Mekong

River region (including Viet Nam), is highly unique to Arizona State University. Consequently, ASU is the only university able to conduct this project.

STATUTORY AUTHORITY

USGS Unique Authority cited at 43 U.S.C. 36d (Federal, State and academic partners)

§ 36d. Cooperative agreements: Notwithstanding the provisions of the Federal Grant and Cooperative Agreement Act of 1977 (31 U.S.C. 6301–6308), the United States Geological Survey is authorized to continue existing, and on and after November 10, 2003, to enter into new cooperative agreements directed towards a particular cooperator, in support of joint research and data collection activities with Federal, State, and academic partners funded by appropriations herein, including those that provide for space in cooperator facilities.