

**Statement of T. Douglas Beard, Jr., Ph.D.**

**Chief of the National Climate Adaptation Science Center of the U.S. Geological Survey**

**before**

**the House Committee on Natural Resources**

**Subcommittee on Energy and Mineral Resources**

**February 17, 2022**

Chairman Lowenthal, Ranking Member Stauber, and members of the Subcommittee, thank you for the opportunity to appear today on behalf of the U.S. Geological Survey (USGS) to testify on the Climate Adaptation Science Centers (CASC) Act.

My name is Doug Beard, and I serve as the Chief of the U.S. Geological Survey (USGS) National Climate Adaptation Science Center, a position I have held since 2009. In this capacity, I have been asked to discuss the official establishment of the National and the Regional Climate Adaptation Science Centers. I am pleased that Congress and the Natural Resources Committee maintain their interest in and support for our work and appreciate your consideration of this important topic.

**Background**

In 2008, recognizing the pressing need to better understand the effects of climate change on the nation's natural resources, Congress directed the USGS to establish a center to understand the impacts of global warming on wildlife. In response to the congressional directive, USGS initiated a stakeholder-driven process to identify how best to access the scientific capabilities needed to help fish and wildlife managers adapt to a changing climate. The outcome of that process suggested a structure that co-located federal employees with university staff to access the best scientists needed to address the questions regardless of its source.

Between 2010 and 2012, the USGS established eight Department of the Interior (DOI) regional Climate Science Centers (CSCs) across the United States. In 2018, Congress renamed the CSCs as Climate Adaptation Science Centers (CASCs). In fiscal year (FY) 2020, in response to congressional direction, the USGS established a ninth regional CASC in the Midwest. The national and regional CASCs, together known as the CASC network, cover the entire continental United States, Alaska, Hawai'i, the U.S. Affiliated Pacific Islands, and the U.S. Caribbean.

## **Current Overview**

Today, the national and regional CASCs conduct research to provide resource managers, indigenous communities, and other partners with the scientific information and decision-making tools they need to understand and adapt to the effects of climate change on fish, wildlife, water, land, and people. The CASCs work closely with national and regional partners to identify the highest priority science needs and execute projects that will inform various science- and adaptation-management questions in their respective regions.

The National CASC, based at USGS headquarters in Reston, Virginia, serves as the national office for the CASC network. The National CASC provides leadership and guidance on administration, partnerships, information management, and communications. The nine regional CASCs focus on delivering science that addresses resource management priorities for federal, state and tribal agencies within their footprint.

The CASC network has been very productive since its inception, producing science to support on-the-ground management needs, training the next generation of natural-resource managers and scientists, and providing data and tools to be used in adaptation planning. For example, in 2021 the CASC network provided more than \$41 million in program funding. Forty new projects were selected just this year, each tied to stakeholder-identified needs across the nation. The CASCs supported 160 students and fellows through our fellowship and training programs, and we worked directly with multiple Tribal Nations to identify their climate science needs. Our scientists produced more than 100 datasets and tools and published more than 170 scientific articles this past fiscal year.

### *Federal-University Partnerships*

Each regional CASC is housed at a host university selected through a competitive award process. The CASCs partner with university scientists, federal researchers, resource managers, non-governmental organizations, conservation groups, and indigenous communities. The science conducted is accomplished as a co-production effort where the end users are actively engaged throughout the scientific process, and the results are directly shared with partners. The regional CASCs also partner with the DOI Bureau of Indian Affairs to support tribal liaisons who work directly with Tribal Nations in identifying and supporting the science needed to inform adaptation actions on tribal lands.

### *Actionable Science*

The CASC network places an emphasis on generating actionable science, information, and products that are used to help inform direct management action and result in usable outcomes. Scientists work iteratively with the intended end users of the scientific products to ensure that our research leads to actions that support resource-management decisions, actions, plans, and

policy. Our science planning process includes engaging stakeholders to identify science needs, developing an annual science plan to address those needs, soliciting proposed projects that align with the science plan, and funding projects that best address stakeholder needs.

### *Projects*

The National and Regional CASCs work closely with partners and stakeholders to address a multitude of science-based goals. Some recent highlights include looking at how critical forest products and foods such as wild rice, fisheries, and upland animals are expected to change with changes in climate; examining how climate change influences harmful algal blooms in the Southeast; and, at our new Midwest center, modeling the interaction of forest management and climate change on the spread and impact of non-native invasive plants. Nationally, our inaugural 2021-2023 Climate Adaptation Postdoctoral (CAP) Fellows cohort is exploring the many ways 21<sup>st</sup>-century fires affect natural and human communities and how managers can prepare for and recover from future fires. Through these activities, the CASCs continue to find new ways to create and share climate-adaptation science with resource managers and users.

### **Authorization Bill**

We support the intent of the Climate Adaptation Science Centers Act, which will ensure that science produced by the CASC network remains a key source for natural and cultural resource planning and management. The USGS believes this bill will provide the necessary authorities to help strengthen and continue to build the Climate Adaptation Science Centers so they can more effectively provide scientific expertise to respond to the effects of extreme weather events and climate trends.

The USGS has some revisions we believe could further strengthen this legislation, and we look forward to continuing to work with the committee on a path forward. Thank you again for the opportunity to testify today. I will be happy to answer any questions you might have.