EPSCoR research combines environmental and social sciences to study how Alaskan households and communities adapt to the effects of a changing climate.

Research is organized into test cases focused on areas of Southeast, Southcentral and Northern Alaska, while a statewide group integrates findings across the three regions. Researchers in each test case are compiling existing social and environmental data, gathering new data through instruments and remote sensing, and combining these information streams to create models, matrices, and tools useful to communities.

> EDUCATION, OUTREACH & DIVERSITY

EPSCoR’s Education, Outreach and Diversity program keeps the public informed of EPSCoR progress and involves Alaskan students and residents in science activities. Key programs integrate K-12 students into climate research and unmanned aerial systems projects, provide University of Alaska students with internships and travel funding, and publicize EPSCoR through public workshops and social media.

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The Southeast Test Case focuses on Berners Bay, near Juneau, where receding glaciers are affecting streams, forests and estuaries. These ecosystem changes in turn impact key resources, such as salmon and the coastal wildlife that supports tourism. Researchers work to understand and measure these ecosystem changes, and to evaluate methods local businesses and agencies can adopt to better anticipate them.

The statewide Coordination, Integration and Synthesis (CIS) Group uses results from test cases to address larger questions about how different communities adapt to change, and to build useful planning tools. CIS is building interactive visualizations of Alaskan ecosystems and has also launched an advanced EPSCoR data portal (epscor.portal.gina.alaska.edu).

The Southcentral Test Case examines the Kenai River watershed south of Anchorage, an area subject to multiple social and environmental changes – from changing precipitation patterns and salmon counts to increasing forest fires. Researchers are studying the ways these changes interact, their consequences to local residents, and the ways local households and leaders perceive and respond to them.

The Northern Test Case focuses on the Arctic village of Nuiqsut, which is experiencing pronounced climatic shifts and landscape change, as well as societal changes resulting from nearby oil and gas development. Researchers study how these dynamics impact subsistence hunting and fishing and other aspects of local lifestyles. They also examine ways local, national and global institutions can better work to support local adaptation.

Alaska EPSCoR improves Alaska's scientific capacity by conducting research into community adaptation, with funding from the National Science Foundation and the State of Alaska. We support students and faculty across Alaska and engage in active public outreach.