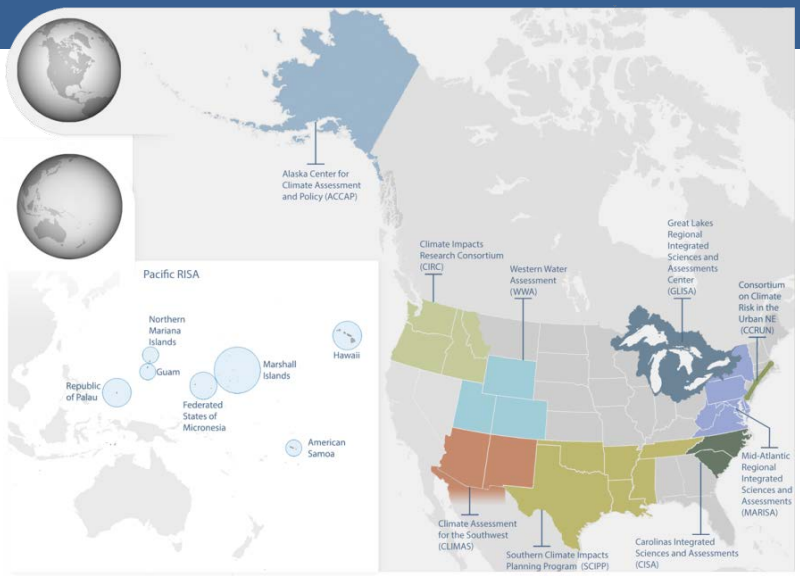
REGIONAL INTEGRATED SCIENCES & ASSESSMENTS (RISA)

Helping regions and communities better prepare and plan for hazards and extreme events for more than 20 years.



In 2016 alone, the United States experienced 15 billion-dollar weather and climate disasters, which resulted in 138 fatalities and cost $46 billion.

For more than 20 years, the NOAA **Regional Integrated Sciences and Assessments (RISA)** Program has been producing actionable climate research, helping to reduce economic damages that Americans face every year due to droughts, floods, forest fires, vector-borne diseases, and a host of other climate and extreme weather impacts. The **network of ten RISA teams across the country** work hand-in-hand with stakeholders and decision makers in regions across the United States to ensure that research and information is responsive to their needs.

Photo Courtesy: Pacific RISA

The sustained regional presence of RISA enables teams to effectively support responses to extreme events. In 2012, CCRUN's expertise in coastal inundation informed New York City planning efforts after Hurricane Sandy, WWA researchers aided Colorado after 2013's record flooding, and RISA teams in the Western United States have supported the region during its recent intense drought.

Photo Courtesy: WWA

Research produced by the RISA program has educated, informed, and closely interacted with thousands of decision makers across the nation, helping them build the expertise to better plan and prepare for climate variability and extreme weather events. RISA products are making a difference today, helping communities and individuals improve resilience, enhance growth, and reduce costs in a variety of sectors. RISA is supported by the National Oceanic and Atmospheric Administration's (NOAA) Climate Program Office.

Updated: April 2017

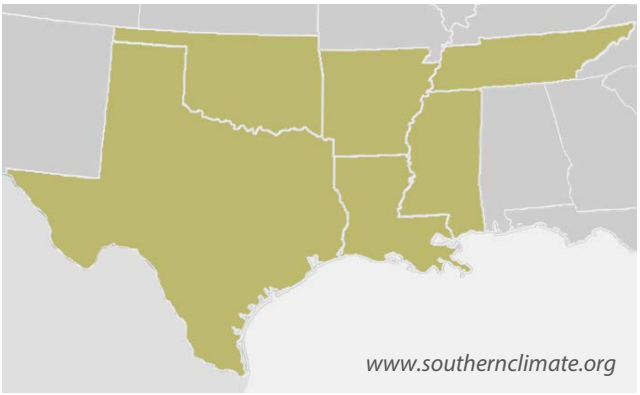
Learn more: **CPO.NOAA.gov/RISA**

HOW IS RISA HELPING COMMUNITIES NEAR ME?

The **Southern Climate Impacts Planning Program (SCIPP)** works to increase resilience and preparedness for weather and climate extremes across six states in the Southern United States. From severe storms, flooding, drought, hurricanes, heat waves, wildfires, to winter storms, the South experiences among the nation's most extensive collection of weather and climate-related hazards, with many Southern states ranking at or near the top of the lists in disaster declarations and billion-dollar disasters.

SCIPP states are some of the most disaster-declared in the United States, according to FEMA.

SOUTHERN CLIMATE IMPACTS PLANNING PROGRAM (SCIPP)



PROTECTING THE PORT OF HOUSTON FROM STORM SURGE

Texas's Port of Houston links U.S. industry to the world. Home to a $15 billion petrochemical complex, the Port is the largest in the Nation, handles 65% of all major U.S. cargo, and adds about $175 billion a year to the state's economy.

The **Southern Climate Impacts Planning Program (SCIPP)** RISA found that this economically vital port is extremely vulnerable to storm surge inundation: 2nd out of the 26 sites studied along the U.S. Gulf Coast. Had Hurricane Ike in 2008 tracked just 25 miles to the south, the storm surge it generated would have inflicted even more damage to the region, potentially inundating local residential developments with toxic, chemically-filled waters.

Using information from historical storm surge events SCIPP is working closely with Rice University, Texas A&M Galveston, and the University of Houston to develop research-based solutions for flood protection for the Port of Houston. The solutions involve: constructing retractable flood gates near the entry of the Houston Ship Channel, elevating coastal roads to function as levees, elevating new developments, and building oyster pilings in Galveston Bay.

The proposed flood protection could save $45 billion in a major storm surge event, according to researchers at Rice University.