Welcome

The Drought Impacts on Regional Ecosystems Network (DIREnet) fosters and facilitates research on drought effects and the potential role of global climate change on the Southwest’s major ecosystems. Much of what DIREnet does is bring scientists and land managers together to plan and conduct research, but here you will find a portal to data, published research, news, and much more.

The Southwest is projected to become warmer and more arid in response to climate change during the 21st century. More severe and longer droughts may also be part of the region’s future. How these changes will affect the Southwest’s forests and woodlands is of increasing concern. Millions of trees throughout the Southwest were killed by bark beetle outbreaks, fires, and other factors linked to drought and warming during the first decade of the century alone.

New Research

The Roles of Hydraulic and Carbon Stress in a Widespread Climate-Induced Forest Die-Off


Large Drought-Induced Aboveground Live Biomass Losses in Southern Rocky Mountain Aspen Forests

Southwestern Colorado has experienced the widespread die-off of aspen trees as the result of severe drought and warmer temperatures. A new study examines the feasibility of estimating this loss of aboveground biomass and suggests new possibilities for monitoring the impacts of large-scale tree mortality events on carbon cycles.

News

Insights into Sudden Aspen Decline

New research traces the recent West-wide decline and death of aspen trees to stress caused by recent drought, which weakened the trees’ ability to move water through their vascular systems.

Texas Drought Kills As Many As 500 Million Trees

Preliminary estimates from Texas Forest Service indicate that as many as 500 million trees scattered across Texas have died this year as a result of the "unrelenting drought."