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Fire and water drive western growth, prompt warming conference

- DON THOMPSON, Associated Press Writer
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(05-25) 16:02 PDT KINGS BEACH, Calif. (AP) --

In the newest apocalyptic global warming film, mountains look like the place to be as hurricanes, tornadoes and floods inundate coastal cities. In reality, the West's mountains are among the harbingers of what's to come, with high-country effects already being felt.

A hundred of the West's top scientists gathered Tuesday at Lake Tahoe to plot how to coordinate their research for the next five years, focusing on studies that will aid residents and policymakers in preparing for the future.

"We have serious issues here -- water's declining, forests are burning and trees are dying," said Henry Diaz of the National Oceanic and Atmospheric Administration's Climate Diagnostic Center in Boulder, Colo.

"The higher up you go, the higher the temperature change," said Ray Bradley of the University of Massachusetts department of geology and geography.

Scientists aren't sure yet if the weather will be wetter or dryer, or whether the current drought will last another year or another century. But rising temperatures do mean less water will be stored in the winter snowpack, which functions as a vast reservoir that trickles water to thirsty cities, cattle, crops and hydroelectric plants during the hot summer months when they need it most.

Warmer winter temperatures mean there will be less snow and more rain, the snow line will creep higher up the mountains, and the spring melt will come earlier. Researchers already have documented those phenomena over the last 50 years, but expect the process to accelerate -- though nowhere near as fast as the Ice Age-triggering weather shifts in the movie.

Hotter summers mean more stress on mountain forests, contributing to the beetle infestations that have killed legions of trees from Alaska to Arizona, turning them to giant matchsticks awaiting a spark.

Scientists are increasingly focusing on fire and water, some of the most elemental tools of nature, and how they may restrict and drive population growth across the West.

Yet there has been little coordination of their research, said organizers of this week's Mountain Climate Sciences Symposium.

Two years ago, scientists at several universities and government agencies realized they needed to fix that. They formed CIRMOUNT -- the Consortium for Integrated Climate-Related Research in Western North American Mountains. The core group is now trying to expand and plot a direction at this week's invitation-only three-day conference.

Scattered researchers have focused on individual mountain ranges, but produced results too limited to draw sweeping conclusions. Yet probing an entire continent or the globe is too daunting.

CIRMOUNT's premise is to create a regional network to study climate changes in the mountains of western North America, with the goal of reaching region-wide conclusions.

Other regions -- in Russia, the Himalayas, South America -- are looking to CIRMOUNT as a model, said Bruno Messerli of the University of Bern, Switzerland.

"We need an example of such an organization," Messerli told the group. "An example for the world."

Out of this week's conference, organizers hope to develop a five-year plan that will drive research and funding, with the ultimate goal of guiding public policy.

Scientists already know they don't have enough information, in part because of mountains' harsh climate.

Though researchers have tracked snow depth for decades, there are only a fraction of the full-scale weather monitoring stations at high altitudes as there are in more accessible valleys. That's improving, but what records do exist date from the period when mankind was already influencing the environment with soot and greenhouse gases.

Researchers said modern weather-trend information must be compared with ancient clues from tree rings, glacial samples and other prehistoric records before they'll know for sure if the current warming is triggered by humans, or is part of a long-term natural cycle driven mainly by ocean temperature variations.

Frighteningly, researchers from the University of Massachusetts, University of Arizona, and National Oceanic and Atmospheric Administration reported Tuesday that long droughts that have periodically choked the West since record-keeping began are nothing like the persistent and extensive droughts that parched the region in eons gone by. Scientists are only beginning to understand how manmade changes may compound those natural rhythms.

On the Net:

Mountain Climate Science Symposium: www.fs.fed.us/psw/mcss/

URL: http://sfgate.com/cgi-bin/article.cgi?file=/news/archive/2004/05/25/state1902EDT7701.DTL
