

Climate change threatens Calif. economy by drying up ecosystems – report

Lacey Johnson, Environment & Energy Publishing, 1-23-12

Global warming could dry up portions of California's grasslands and forests, posing a threat to the state's economy, according to a study published in the February issue of *Climatic Change*.

Researchers say climate shifts will decrease the natural vegetation that livestock need for grazing by 14 to 58 percent by the end of the century, forcing ranchers to grow or buy additional hay to supplement the animals' diets. These new expenses are projected to cost the state's ranching industry up to \$235 million annually by 2070.

Forests are also expected to become sparser and drier, which would increase the likelihood of fires and limit the ability of trees to offset climate change by sequestering carbon. Changes in rain, hail and snowfall could also result in a 15 to 70 percent increase in shrub lands.

"Much of the talk about climate change in California has been about the impacts of sea-level rise and droughts," said Linwood Pendleton, the director of ocean and coastal policy at Duke University's Nicholas Institute for Environmental Policy Solutions and a co-author of the study. "Our work shows that even the gritty worlds of cattle ranching and forestry may take it on the chin as California skies become increasingly carbon-rich."

If the climate continues to grow hotter and drier, the social costs could soon be as high as \$5.2 billion a year, rising to \$62 billion a year by 2070, say researchers.

A carbon cap-and-trade program is scheduled to take effect in California this year, and researchers say it could bring relief to the ranching industry. Under the new system, landowners will be able to earn credits by capturing carbon on their land, gaining offsets that they can then sell to bring in revenue.