



Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

press release

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Two Dramatically Different Futures Shown For California's Climate Depending On Emissions Choices Made Today, New Study Finds

WASHINGTON, DC — A landmark climate change study by 19 scientists will be published in the Proceedings of the National Academy of Sciences today. The article was authored by leading experts from a number of universities and research institutions including Stanford University, University of California at Berkeley, Scripps Institution of Oceanography, and Lawrence Berkeley National Laboratory. It provides a powerful demonstration of how the severity of climate change impacts on California will depend on the amount of future greenhouse gas emissions from fossil fuel combustion and other human activities.

Major findings include a dramatic increase in extreme heat and heat-related mortality and significant reductions in Sierra snowpack, with cascading impacts on water supply. These impacts are greatly worsened if California and the world continue on a pathway of high emissions of carbon dioxide and other heat-trapping gases.

“The study reveals a big difference in consequences for California’s future climate depending on the amount of emissions of heat-trapping gases,” said Katharine Hayhoe, lead author of the study. “We looked at two different future scenarios for California, one heavily dependent on fossil fuels, and one more dependent on investment in alternative technologies. The differences were dramatic.”

The study focused on California due to its diverse climate zones, its large economy (5th in the world) which includes climate-sensitive industries such as agriculture, and its substantial contributions to global greenhouse gas emissions.

“Our key finding is that California will experience widespread heat-related impacts. That would mean more frequent and extreme heatwaves and a sharp reduction in snowpack if we stick to a high emissions pathway,” said author Michael Hanemann. “Earlier snowmelt will change the timing and availability of water supply to 85% of California’s agricultural and residential users.”

Other findings showed that higher temperatures could seriously impair agricultural production. “California’s position as a leader in the production of high quality wine grapes is at risk,” said Chris Field.

“What our findings tell us is that the decisions we make today will have long-term consequences that our children and grandchildren will experience in their lifetimes,” concluded Stephen Schneider.

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Formed in 1969, UCS is a nonprofit partnership of scientists and citizens combining rigorous scientific analysis, innovative policy development and effective citizen advocacy to achieve practical environmental solutions. Visit us on the web at www.ucsusa.org.

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