



CENTER ON RACE, POVERTY & THE ENVIRONMENT  
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# Climate Change 101

**Climate change** is the buildup of human-created gases in the earth's atmosphere. These gases in the atmosphere trap the sun's heat, and more heat causes change in global weather patterns.<sup>1</sup>

**Climate change is real.** The Intergovernmental Panel on Climate Change (IPCC) of the United Nations recently stated that "it is now evident from observations of *increases in global average air and ocean temperatures, widespread melting snow and ice, and rising mean sea level*" that the warming of our climate system is undeniable.<sup>2</sup> One consequence of warmer temperatures is an increased likelihood of precipitation falling as rain rather than snow. This **leads to increased rains, reduced snowpack, and less water resources in summer**, when they are most needed.



## What does Climate Change mean for the Central Valley?

The Central Valley is currently one of the most polluted, lowest quality air basins in the entire U.S. Central Valley *industries are large contributors* to climate change gases, however it is the *residents of the Central Valley* who **bear the hazardous consequences** of pollution-driven climate change.

- **Causes:** Burning fossil fuel emits carbon dioxide (among other gases), and carbon dioxide is one of the main greenhouse gases causing global warming. Power plants, driving trucks & cars, and oil refineries are among the primary fossil fuel burning activities contributing to global warming.
- **Health Impacts:** Increased spread of disease, heat-related illness, respiratory disorders – such as asthma – will increase in severity as climate change couples with ozone and particulate matter pollution.<sup>3</sup>
- **California Agriculture:** As temperatures rise, so will crop demand for water. Water supplies are less consistent as mountain snowpack continues to decline. With higher temperatures, ranges of crop-damaging pests and disease will change. Ozone pollution may be exacerbated by global warming, this pollution is known to harm plant growth and susceptibility to disease.<sup>4</sup>

<sup>1</sup> <http://www.green-network.com/facts/glossary.htm> Accessed 2/2/10

<sup>2</sup> Intergovernmental Panel on Climate Change. *Climate Change 2007: The Physical Science Bases, Summary for Policymakers.*

<sup>3</sup> <http://www.epa.gov/climatechange/effects/health.html> Accessed 2/17/10

<sup>4</sup> Union of Concerned Scientists "Global Warming and California Agriculture" [www.ucsusa.org/clean\\_california](http://www.ucsusa.org/clean_california)