

# California's Fourth Climate Change Assessment Supporting Research

**Title:** Drought Impacts and Drought Vulnerability in Rural Communities of California's San Joaquin Valley

**Authors:** Christina Greene

## ABSTRACT

The vulnerability of food and agricultural systems to climate variability and change is extensively studied. However, the vulnerability of agricultural labor is largely ignored in climate vulnerability and adaptation studies, especially in the context of developed countries. This research examines the drought vulnerability of farmworkers both in the fields and in their communities by analyzing how changes in water resources and agricultural practices impact socioeconomic drought. A combination of surveys and semi-structured interviews with farmworkers, farmers, and social service providers in California's San Joaquin Valley is used to identify the impacts of drought on agricultural labor, water security, food security, and health. Findings demonstrate that drought impacts and vulnerabilities are multi-scalar and uneven. Agricultural drought adaptations, including increase in groundwater pumping and changes in crops, reshapes the vulnerability of farmworkers and rural communities. There is a need for continued interdisciplinary research on the socioeconomic dimensions of drought as well as increased representation of needs and vulnerabilities of farmworkers and rural communities in drought and climate change adaptation planning.

## HIGHLIGHTS

- Surveyed residents of rural communities in the San Joaquin Valley reported the drought impacted employment, food security, water security, and health.
- Agricultural drought adaptations, including increases in groundwater pumping and changes in crops that require less labor, can increase the vulnerability of farmworkers and rural communities.

## Citation:

Greene, Christina. (in press, 2018). Broadening understandings of drought: the climate vulnerability of farmworkers and rural communities in California (USA). *Environmental Science & Policy*.