

LAND OF RISK

LAND OF OPPORTUNITY



Cumulative Environmental Vulnerabilities in California's San Joaquin Valley

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Action Principles:

- **Strive for environmental justice.** Actions should reduce cumulative health impacts on the most affected and vulnerable communities.
- **Action should be precautionary, not reactive.** Agencies should act to introduce this type of precautionary, not reactive approach into decision making.
- **Break out of silos and build bridges.** Public agencies must work collaboratively across institutional boundaries.
- **Residents speak for themselves.** Agencies must engage with residents of the affected communities in a climate of mutual respect and shared learning.



Josefina Miranda of Earlimart – who once miscarried after exposure to workplace pesticides – shows her daughter how she protects herself when she works in the fields.

California's San Joaquin Valley is a place of contradictions. It contains some of the most productive and wealth-generating agricultural lands on the planet. At the same time, many of the people who produce this bounty live in poverty and often face health risks due to toxic by-products of the region's economy. The San Joaquin Valley is also a land of opportunity where California can learn important lessons on how to solve these most pressing problems to fulfill its promise as the Golden State.

This report is based on a three year study by the UC Davis Center for Regional Change, in affiliation with the Environmental Justice Project of the John Muir Institute of the Environment and with funding from the Ford Foundation. It highlights the places and populations in the San Joaquin Valley that are challenged by high levels of environmental hazards and high levels of social vulnerability that can lead to poor health conditions. It is intended to assist policy makers and public agency leaders to better prioritize actions to protect the health of the region's residents and to build healthy communities. In particular, the analysis in this report supports the recommendation that public policies must address these hazards in a coordinated way rather than the segmented approach of the current regulatory system.

Our analysis demonstrates:

- Nearly one-third of the nearly four million people in the region face both high degrees of environmental risks (for example, toxic air and water pollutants) and high degrees of social vulnerability (poverty, low levels of formal education, and low English literacy). Other research has shown that such social vulnerability increases susceptibility to environmental hazards and increases risks of health problems.
- There are many more environmental hazards identified by area residents than are documented in state and federal regulatory inventories.
- The combined conditions of environmental hazards and social vulnerability are not randomly distributed across the region but are concentrated in a range of urban and rural communities.

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- These areas of high environmental vulnerability deserve special attention from regulators and policy makers to protect the health and well-being of area residents.

Our methodology integrates multiple factors into three holistic indices: a Cumulative Environmental Hazards Index (CEHI) a Social Vulnerability Index (SVI), and a Health Index (HI). Together these indices form what we call a Cumulative Environmental Vulnerability Assessment (CEVA). The areas with medium to high CEHI and SVI are called Cumulative Environmental Vulnerability Action Zones (CEVAZ). Residents in many of these CEVAZ also contend with health conditions far worse than the region as a whole.

Using the CEVA, in combination with community members' environmental knowledge derived from participatory mapping workshops with the San Joaquin Valley Cumulative Health Impacts Project, this report provides the factual basis for comprehensive and innovative environmental protection as well as public health policies for the San Joaquin Valley and beyond. Using these methods, leaders and communities can be self-empowered to create innovative strategies to address common problems for the good of the region and the state as a whole. Based on the analysis of the report's data, the authors recommend that policy makers and regulators create ways to adopt CEVA in decision-making processes on rule-making, permitting, oversight, funding, and enforcement.

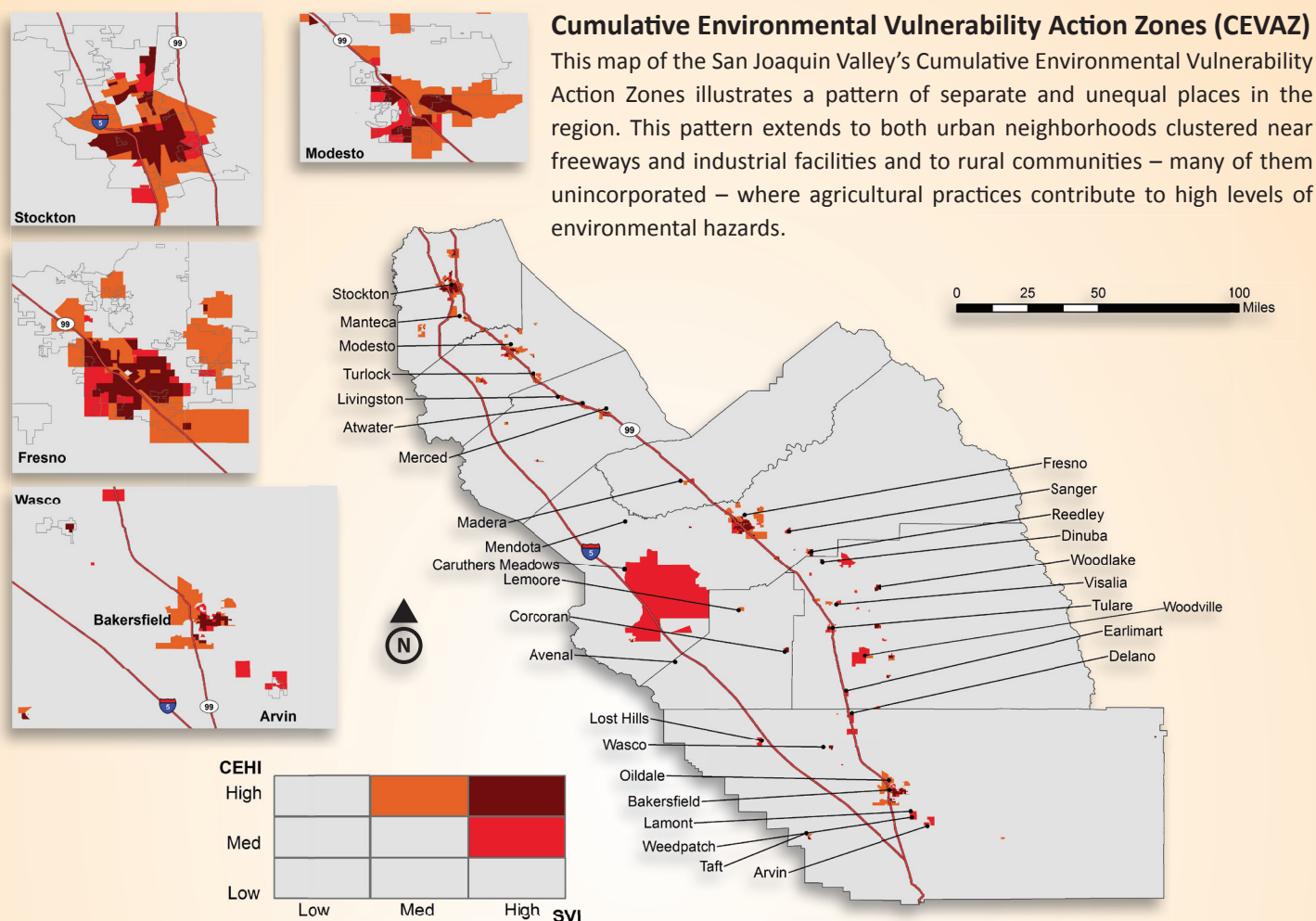


West Fresno area leader, Mary Curry, uses a community-generated map of environmental hazards in a rally calling for the closure of a noxious rendering plant in the neighborhood.

Action Framework:

1. **Build on existing strengths of demonstrated methods of cumulative impacts analysis** developed by a range of academic and agency experts.
2. **Integrate CEVA into existing policy and planning frameworks.** The state of California should create an annual Cumulative Environmental Vulnerability Report Card overseen by a Cumulative Impacts coordinating body.
3. **Move from analysis to coordinated action.** The state of California should designate Cumulative Environmental Vulnerability Action Zones (CEVAZ) qualifying for enhanced protection, increased interagency coordination, investments, and community engagement.
4. **Improve meaningfulness of community participation.** Public agencies implementing CEVA should engage with affected communities as full partners and incorporate, respect, and compensate community knowledge.
5. **Enhance resources for continued improvements in CEVA.** California governments should invest in continued improvement of data sources relevant to CEVA, such as bio-monitoring, water quality, and longitudinal analyses.

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The diverse people and places of California's San Joaquin Valley are a source of great wealth for the state, nation, and world as a whole. By taking action on the findings of this study, the region's leaders can help fulfill the promise of this land of opportunity.

To read the full version of this report, please visit:

<http://regionalchange.ucdavis.edu/publications/land-of-risk-land-of-opportunity>

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