Local Strategies for Mitigating and Adapting to Climate Change in California: A Case Study from Yolo County.

IN CALIFORNIA, THERE IS A NEED FOR NEW EFFORTS within the state's government and agriculture sectors to assess risks, adapt production strategies, and mitigate greenhouse gas (GHG) emissions. Here we present interdisciplinary research which examines the risks associated with climate change as well as the opportunities for mitigation and adaptation in California's Central Valley, using Yolo County as a representative case study.

This study demonstrates the value of participatory research with local stakeholders aimed at developing region-specific tools that aid decision-making, incentivize GHG mitigation and enhance local adaptive capacity.

Farmer Views on Climate Change
The attitudes and perceptions of local farmers towards climate change risk, mitigation, and adaptation are being evaluated using interviews and quantitative surveys.

Agricultural GHG Emissions
Scientists, growers and other rural stakeholders are working with local officials to carry out an inventory of Yolo County's GHG emissions as a part of a county-wide climate action plan that considers the role of agriculture in GHG mitigation and climate change adaptation.

Land-Use Change
The GIS-based UPLAN software was used to assess the impact of 3 development scenarios: IPCC A2 (fossil-fuel intensive), IPCC B1 (green), and AB32+ (highly green) on land-use types of agroecological importance. (Wheeler et al., in prep.).

Water Management Planning
Scientists and local water managers at the Yolo County Flood Control and Water Conservation District (YCFWCD) are assessing the risks associated with climate change, water scarcity, and the occurrence of extreme weather events by linking an economic analysis of local trends in climate and agricultural production (e.g. crop acreage and value) to a scenario-driven water evaluation and planning (WEAP) model (Mehta et al., in prep.).

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