CLIMATE CHANGE RESEARCH PROGRAM

GRANT AWARD

CALIFORNIA STRATEGIC GROWTH COUNCIL

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

INTEGRATING LAND USE AND CLIMATE CHANGE ON CALIFORNIA'S CENTRAL COAST: IMPACTS AND ADAPTATIONS FOR LOCAL COMMUNITIES

PRINCIPAL INVESTIGATOR: **Ruth Langridge**, Associate Researcher, Politics Department, Legal Studies Program

PROJECT GRANT	PRIORITY RESEARCH AREAS
$373,643.00	☑ Supporting and Protecting Vulnerable Communities from the Impacts of Climate Change
Duration: 12 Months	☑ Integrating Land Use, Conservation, and Management into California Climate Change Programs
	☑ Increasing Data Accessibility and Planning Support for State, Local, and Regional Climate Change Planning
	☑ Accelerating and Supporting Transitions to Climate Start Communities

Land use change and land use cover (LULC) are an important component of climate change research; however, their utility at local to regional scales is limited. Researchers will compile LULC and climate change trends relevant to land use decision making for the Central Coast Region, an understudied area often overlooked compared to urban centers north and south and the Central Valley. They will examine localized gaps in data and research as well as the vulnerability of local communities to the impacts of the unique LULC and climate conditions. Scenario analysis will be used to support land and resource manager decision making to effectively develop local climate adaptation strategies.

PARTNERS:	➢ Association of Monterey Bay Area Governments ➢ Central Coast Climate Collaborative ➢ City of Salinas ➢ Elkhorn Slough Foundation
RESEARCH ACTIVITIES	Model future climate change projections and land use change and cover for the region. Examine current vulnerability to climate impacts in the region, and assess the future vulnerability on agriculture, municipalities and natural lands. Explore alternative future climate adaptation possibilities. Develop a case study in Salinas that scales down regional data in order to examine impacts on disadvantaged communities.
FACILITATES GREENHOUSE GAS EMISSIONS REDUCTIONS:	This research emphasizes and incorporates the consideration of GHG emission reduction in scenario analyses that identify issues such as converting natural forestland to cities or agriculture, and the depletion of groundwater storage requiring more energy use for groundwater withdrawals.
BENEFITS DISADVANTAGED AND LOW INCOME COMMUNITIES:	In partnership with the City of Salinas, researchers will examine the impacts of, and potential adaptations to, shifts in climate and local land use for use in their Climate Action Plan. This examination will inform the public about the serious water quality issues facing the Salinas Valley and its vulnerability under future climate and LULC changes, including for example numerous unregulated and unmonitored wells that are susceptible to contaminated drinking water, over 100 small water systems reporting at least one incident of nitrate contamination, and the vulnerability of low-income agricultural workers from depleted groundwater resources resulting in employment drops and economic struggles
ENGAGEMENT ACTIVITIES	Work with a diverse group of regional and local partners and initiate broader collaborative efforts through stakeholder and public involvement meetings. Solicit input and feedback on scenario analysis for testing future adaptation possibilities to build climate resilience, and identifying potential future scenarios for model projections and climate adaptation strategies. Disseminate information about regional ecosystem vulnerabilities and existing adaptation projects. Generate data and information needed to ensure the preparation of beneficial community driven planning.