

Climate and Health Concept Note



Climate Change impacts food security, food access, food storage during climate change related disasters

To mitigate negative impacts from climate change on health, UC ANR advisors and specialists develop and extend applied research and education across food systems networks, natural areas, parks, and communities. Our work helps to ensure the safety and reliability of our food system, enhance urban green spaces, protect natural resources, and promote sustainable lifestyles in communities throughout California.

Our Vision: A Focus on Climate Change and Health

Climate change negatively affects the physical and psychological health and well-being of Californians and environment, disproportionately impacting individuals living in poverty and groups directly affected by racism, ableism and other forms of systemic oppression. Impacts to the environment from climate change include drought, urban heat island effect, reduced production of food and disruption to food systems, food and nutrition insecurity, pervasive catastrophic wildfires, pest infestations, and plant diseases. These impacts exacerbate human physical health problems such as respiratory, cardiovascular, and immune system illnesses, as well as emerging infectious diseases. Psychological impacts of the climate crisis include stress, anxiety, and depression as well as acute and post-disaster trauma. And this crisis threatens our food supply.

Our future human, community, agricultural, and environmental health depend on bold governmental actions to slow the progression of climate change. We must cultivate a skilled workforce and informed public to address the current crisis, organize to respond to and protect our communities from future disruptions and cultivate leadership and cross-sectoral collaboration to minimize future harms. As UC ANR, we already possess knowledge about how to mitigate climate change by changing policies, systems, environments, and individual behaviors. These approaches can be applied to increase green spaces; plant with heat, drought, and pest resistant species that reduce urban heat island effects; reduce food waste; limit energy usage and transition energy dependency to renewable and environmentally sustainable fuels; and minimize the environmental impact of agriculture by adopting practices such as sequestering carbon.

Our Approach

UC ANR academics develop and extend applied research and education in the areas of agriculture and natural resources. Academics have expertise in Nutrition, Family, and Consumer Sciences; Youth and Community Development; Agriculture; Environmental Horticulture; Livestock; and Natural Resources. The UC ANR Climate Change Program Team brings together academics who are experts on climate change across disciplines that work together to further climate related ANR Strategic Initiatives and Public Values that improve the health and quality of life of Californians while protecting the environment and conserving natural resources.

ANR advisors and specialists conduct and extend applied research and education that provide solutions to California's climate change challenges in the areas of agriculture, nutrition and health, environmental horticulture, and natural resource management. Engaging our clientele and stakeholders empowers them to adopt climate-friendly practices that foster healthier, more resilient communities, farms, and ecosystems. These activities include:

- **Agriculture**
 - Working with farmers and ranchers to improve production efficiency and increase yields
 - Identifying crop and livestock genetics that can better withstand changing growing conditions
 - Researching and promoting practices to increase carbon sequestration on farms and rangelands
 - Utilizing ruminant livestock to manage wildland fuels to reduce the chance of catastrophic wildfires, especially in the Wildland Urban Interface
- **Nutrition and Health**
 - Researching and designing interventions that influence consumer food choices and practices
 - Providing education to families on preventing food waste, aligning healthy eating with climate goals, adopting climate-friendly gardening practices, and maintaining fitness levels that encourage using environmentally friendly transportation (particularly walking and bicycling)
 - Cultivate youth and workforce leaders with an environmental justice focus
- **Environmental Horticulture**
 - Identifying and promoting heat, drought, and pest-resistant landscape trees to reduce the urban heat island effect, sequester carbon, provide habitat, and absorb pollutants from air, water, and soil
 - Providing training to decision-makers on the vital role landscape plants play in mitigating climate change and improving community and neighborhood health

Get Involved

Multiple opportunities exist for UC ANR academics, staff, and volunteers to partner with external organizations and other climate change-focused programs to mitigate the impacts of climate change through applied research and education. Priorities include:

- Resolving food waste issues and supporting reduction of short-lived climate pollutants (SB 1383). Working with stakeholders from every step of the food system to reduce food waste from farm to fork. Our diversity and breadth of experience along the food system chain makes UC ANR unique in our ability to impact this issue
- Partnerships to plant climate-ready landscape trees that reduce the urban heat effect, sequester carbon, provide habitat, filter pollutants out of air and water and provide shade, especially in disadvantaged canopies with low tree canopy cover
- Establish an equity food system, increase disadvantaged community's preparedness to climate-change related disasters, and improve local food system resilience to climate change



Increasing food waste awareness and prevent food waste to protect environment