California's Fifth Climate Change Assessment 2023 Engagement Summary

December 2023

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CALIFORNIA'S FIFTH CLIMATE CHANGE ASSESSMENT

About California's Fifth Climate Change Assessment

California's Fifth Climate Change Assessment (Fifth Assessment) is a suite of original research and tools describing the impacts and risks of climate change to equip communities and leaders across the state with the best available science and knowledge to inform their planning and decision-making processes. Worse and more frequent extreme weather events and trends are impacting the state every year, making up-to-date information on climate change imperative to driving sound policy and investment decisions. The Fifth Assessment makes the best available science accessible to California's communities to help understand their vulnerability to the impacts of climate change and pathways to resilience.

To drive science to action and inform decision-making at the regional and local levels, the Fifth Assessment is expanding opportunities for communities, tribes, academia, and other partners to participate in the research process. This includes establishing the Climate Assessment's first Tribal Research Program and prioritizing community engagement at all stages of the research process for the regional, topical, and statewide synthesis reports.

Building meaningful partnerships across California's diverse communities, disciplines, and geographies and implementing a collaborative and inclusive process to produce new research has never been done at this scale. This model for community-led research sets a baseline for future climate action to leverage the best available science alongside Indigenous Knowledge(s), lived experience, and other ways of knowing so that all who are experiencing the impacts of climate change are not only represented in future climate research, policy, and action but are engaged in creating a more resilient future for all.

Engagement Overview

Throughout 2023, California's Fifth Climate Change Assessment team worked with a broad and diverse range of partners to inform the foundation of key Fifth Assessment products, such as the Regional Synthesis Reports, Statewide Topical Reports, and Tribal Research Program. **This summary highlights the 2023 engagement efforts and collects themes, recommendations, and takeaways from the Regional Workshop series.** These engagement efforts included, but were not limited to:

- A public **Request for Information** and **four virtual listening sessions** to guide the development of a framework for the Regional Synthesis Reports.
- **Nine in-person** and **three virtual public workshops** to gather feedback on the framework for the Regional Synthesis Reports, identify local priorities related to climate impacts, and connect potential author teams for the reports. Communities were also invited to provide feedback on the State Adaptation Strategy and the Vulnerable Communities Platform.
- **Monthly Tribal Advisory Group meetings, government-to-government consultations, listening sessions, and roundtables as part of the Tribal Research Program.**
- Participation in **multiple statewide conferences**, such as the California Tribal Water Summit, the California Adaptation Forum, the Adaptation Planning Association (APA) California Conference, the San Diego Climate Summit, the American Geophysical Union (AGU), and the Tribal Climate and Health Adaptation Summit.
- Regular and ongoing **coordination with State agencies** through internal forums and public working groups, such as the ICARP Technical Advisory Council and the Climate Data and Analysis Working Group.

2023 Regional Workshops

During the regional workshops held from July-November 2023, participants were asked to review the proposed boundaries of the Fifth Assessment's nine regions, highlight significant features in their region, identify key topics and research priorities, and discuss how to make the Fifth Assessment and other State climate resources accessible and useful for communities. Additionally, the workshops were designed to strengthen relationships between researchers and community partners, such as local and regional governments, community-based organizations, tribal members, and tribal-serving organizations.

Fourth Assessment Regions

Updated Fifth Assessment Regions

The in-person and virtual workshops resulted in engagement with over 400 participants representing six main sectors: science/academia, community-based organizations, local or regional governments, tribes/tribal serving organizations, private organizations, and State agencies.

Below, the high-level summaries of the feedback gathered for each Assessment region are designed to provide transparency about the major topics discussed during the workshops. This feedback, alongside detailed notes taken throughout our engagement efforts, will be used to inform the development of the Fifth Assessment, including but not limited to the Regional Synthesis Reports, the Topical Synthesis Reports, the Tribal Research Program, and future public engagement. **The Fifth Assessment team is especially grateful to our community partners and all of the participants in the workshops who dedicated their time and offered thoughtful input to ensure that the Fifth Assessment is meaningful for communities.**

CALIFORNIA'S FIFTH CLIMATE CHANGE ASSESSMENT

Central Coast Workshop

The Central Coast workshop included community members from Santa Cruz, San Benito, Monterey, San Luis Obispo, and Santa Barbara counties.

Communities in the Central Coast identified concerns about major climate impacts, such as wildfire, sea level rise, marine heatwaves, and extreme heat. Particularly, they emphasized the effects of more frequent and intense storms, coastal erosion, and salt intrusion. The region is also vulnerable to flooding and landslides due to extreme precipitation events. Participants highlighted the importance of environmental justice, especially the risks to vulnerable groups, such as historically marginalized communities, indigenous communities, farm workers, and unhoused people. They stressed the need to better understand all hazards in the area and the risks to critical infrastructure, such as transportation, in order to build capacity for emergency services during extreme events like the flooding that devastated communities in Pajaro this past year. With regard to tribal communities, participants discussed the vulnerability of tribal cultural resources to the impacts of climate change as well as the role of Traditional Ecological Knowledge in informing solutions and restoration projects.

Inland Deserts Workshop

The Inland Deserts workshop included community members from Eastern San Bernardino, Riverside, and Imperial counties.

Communities in the Inland Deserts highlighted the unique climate change-related challenges they face, primarily focused on extreme heat. Workshop participants discussed the public health impacts of climate change ranging from air quality and pollution to heat related health risks, especially for vulnerable communities like agriculture workers and senior populations. They were interested in better understanding the effects of intersecting hazards, for example, the impacts of the drought and flood cycle and extreme heat. Other issues that were elevated were the risk of soil contamination and degradation, food security, and job diversity. The Salton Sea is a unique feature of the region and exacerbates climate impacts as increasing temperatures are accelerating its evaporation and increasing salinity. This has implications for the local water supply, agriculture, and air quality. Participants discussed opportunities to build resilience, emphasizing the lack of reliable infrastructure (e.g., telecommunications, street lighting, etc.) and aging infrastructure in the region. They also highlighted the importance of any resilience or adaptation measure to have considerations for the urban/rural divide, especially for unincorporated communities, and considerations for immigrant communities, particularly as it relates to language barriers.

Los Angeles Workshop

The workshop in the Los Angeles region included community members from Ventura, Los Angeles, Orange, and western San Bernardino and Riverside counties.

Communities in the Los Angeles region identified several priority climate change impacts. Extreme heat and the urban heat island effect were strongly emphasized, particularly the risk to vulnerable communities in terms of their access to resilient infrastructure and impacts to public health. Public health was a consistent theme throughout the discussion, highlighting air quality, air pollution, heat, mosquitos, and the psychological impacts of climate change as major concerns. Participants also discussed the importance of understanding other factors that contribute to vulnerability to climate change, including socioeconomic status, health disparities, language barriers, and access to resources. Additionally, participants touched on the cascading impacts of wildfire, sea level rise, flooding, and drought. They identified concerns about the climate change impacts to drinking water and wastewater systems as well as the impacts to jobs and the workforce.

North Coast Workshop

The North Coast workshop included community members from Lake, Mendocino, Humboldt, Trinity, Siskiyou, and Del Norte counties.

Climate change impacts that are major priorities for communities in the North Coast include sea level rise, flooding, and wildfire. As a largely rural region, the North Coast faces unique challenges and risks during climate emergencies. For example, landslides and power outages can cut off essential resources to communities. Climate change has also significantly impacted the biodiversity in the region, leading to loss of species and habitats, invasive pests, and increases in toxins that have both ecological and economic impacts. Workshop participants highlighted that the North Coast lacks locally-relevant data related to climate resilience, making up-to-date information on climate-related vulnerabilities even more important to better plan for impacts like wildfire. They emphasized the need for holistic land, forest, and watershed management, especially in collaboration with tribes. The co-development of knowledge with tribes was elevated as essential for adaptation and resilience efforts. The group also discussed the trauma and mental health effects of climate change as well as risks posed to tribal cultural resources, such as sacred sites.

Sacramento Valley Workshop

The Sacramento Valley workshop included community members from Sacramento, Yolo, Sutter, Yuba, Colusa, Glenn, Butte, Tehama, Shasta, eastern Solano, and western Placer counties.

Communities in the Sacramento Valley region highlighted wildfires, extreme heat, drought, and flooding as priority issues during the workshop. For wildfires, participants discussed related issues such as wildfire risk, emergency preparation and evacuation, and public health concerns related to air quality caused by smoke. There was strong interest in the impacts of climate change on water-related issues, such as water supply, demand, quality, and surface/groundwater interactions as well as the confluence of these issues on water rights and the impact to drinking wells. The role of the California Delta within and across regions was also emphasized, especially as it relates to the risk of flooding.

Participants highlighted the importance of addressing climate change impacts to vulnerable communities, impacts to cultural resources, and the importance of improving communication and collaboration between counties and local communities, particularly when gathering information and data regarding urban and rural communities. They were also interested in exploring the costs associated with inaction across different climate change scenarios.

San Diego Workshop

The workshop in the San Diego region included community members from San Diego County.

Communities in the San Diego region discussed many of the priority issues affecting their region due to climate change. This included extreme heat and the urban heat island effect, extreme precipitation events, marine heatwaves, sea level rise, and concerns about the capacity to respond to these events when critical infrastructure is impacted. For example, power outages, lack of air conditioning, and impacts to roads limiting access to the coast for inland communities were top of mind for many participants. There was a strong emphasis on cascading impacts and the risks to vulnerable communities, particularly refugee and immigrant communities. Additionally, participants highlighted the loss of biodiversity and habitats and the impacts to ecosystems. When discussing solutions, participants emphasized collaboration with tribes and Traditional Ecological Knowledge while also elevating the risk to tribal cultural resources. Across

all climate topics, the group highlighted the unique needs of both coastal and inland communities as well as the binational management considerations for the US/Mexico border that the region must take into account when approaching vulnerability and resilience.

San Francisco Bay Area Workshop

The San Francisco Bay Area workshop included community members from San Francisco, Marin, Contra Costa, Alameda, the western half of Solano, Santa Clara, San Mateo, Sonoma, and Napa Counties.

Communities in the San Francisco Bay Area region face climate impacts such as sea level rise, flooding, wildfire, and extreme heat. A major priority for many residents is addressing inequity and centering environmental justice in all climate solutions. Sea level rise, coastal erosion, shoreline protection, and salt intrusion emerged as primary concerns. Flooding due to extreme precipitation events and the public health impacts of wildfires and wildfire smoke were also raised as priorities. Participants discussed transboundary issues, such as impacts to the Delta, economic resilience, and inequity in climate impacts for vulnerable communities. While the region has many local adaptation plans and resources, participants pointed to the need for increased collaboration between the State and local governments. The economic impacts of climate change, the cost of inaction, and the need to better understand hazards in the region to build capacity for emergency responses were highlighted as areas for further exploration.

San Joaquin Valley Workshop

The San Joaquin Valley workshop included community members from San Joaquin, Stanislaus, Merced, Kings, and the western parts of Madera, Fresno, Tulare, and Kern Counties.

San Joaquin Valley communities highlighted drought and extreme heat as priority climate issues. Direct impacts and cascading impacts of climate change were of particular concern for the region, including issues such as air quality, particularly related to dust storms, water quality, their impacts to public health, and emergency responses. Participants also emphasized the effects of climate change on issues such as economic resilience, especially as it relates to the agriculture sector. They expressed concerns about the impacts of extreme heat and precipitation events on agriculture workers and on crops. Environmental justice and the disproportionate impacts of climate change on vulnerable communities were stressed throughout the discussion, while education and accessibility of information were highlighted as crucial solutions for engaging local communities in the region.

Sierra Nevada Workshop

The Sierra Nevada workshop included community members from Modoc, Lassen, Plumas, Sierra, Nevada, Placer, El Dorado, Amador, Calaveras, Alpine, Mono, Tuolumne, Mariposa, Inyo, and the eastern parts of Madera, Fresno, Tulare, and Kern Counties.

Communities in the Sierra Nevada region highlighted wildfire, including its primary and secondary effects, as a priority issue in the region. Participants emphasized the importance of understanding the risks and

vulnerabilities for different types of fires, impacts to public health, and solutions enhanced with tribal knowledge. Flooding, drought, and extreme heat are also seen throughout the region. Additionally, they discussed the need to better understand the complexity and vulnerability to multiple and intersecting hazards. Participants discussed the impacts of climate change on emergency services, the tourism sector, human displacement, and the economy more broadly. The cultural and ecological diversity of the region and transboundary issues such as the risk to water consumers, grid reliability, and internet access were all highlighted as significant concerns.

Thank you to our workshop co-hosts and partners, without which this regional engagement would not have been possible!

- California Indian Environmental Alliance (CIEA)
- University of California, Davis
- Socio Environmental and Education Network (SEEN)
- Bay Area Climate Adaptation Network (BayCAN)
- University of California, Berkeley
- Sierra Business Council
- Regeneracion Pajaro Valley
- Seymour Marine Discovery Center
- TreePeople
- Climate Science Alliance
- Alianza Coachella Valley
- University of California, Riverside
- Yurok Tribe