

**Advancing Climate Justice in California:
Guiding Principles and Recommendations
for Policy and Funding Decisions
August 2017**

Prepared by the Climate Justice Working Group

Climate Justice Working Group: Origin and Objectives

In Fall 2016, the Climate Justice Working Group (CJWG), including environmental justice, public health, and climate equity leaders, convened to develop recommendations for ensuring that the 2017 update of *Safeguarding California*—California’s climate change adaptation strategy—is responsive to environmental justice and climate equity concerns. As part of its work, CJWG reviewed past “implementation action plans” developed by state agencies pursuant to Governor Brown’s 2015 executive order on climate change, and developed detailed and comprehensive recommendations for state adaptation and resilience priorities. CJWG’s work covered the following sectors: agriculture, biodiversity and habitat, emergency management, energy, forestry, land use and community development, oceans and coastal resources, public health, transportation, and water. CJWG shared its reviews and recommendations with the California Natural Resources Agency, California Department of Health, and Governor’s Office of Planning and Research for consideration in the 2017 update of *Safeguarding California*.

Building on these efforts, CJWG developed definitions of key concepts—including climate justice and climate vulnerability—as well as guiding principles and recommendations for California leaders to consider in future development and implementation of climate change adaptation policies and funding decisions. Resources Legacy Fund (RLF) supported the development of this briefing paper so that CJWG’s work can be shared with the public.

Climate Justice Working Group Members

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We would like to thank RLF for supporting CJWG’s work and acknowledge the California Natural Resources Agency, Governor’s Office of Planning and Research, and California Department of Public Health for consultation and support of climate justice principles in California’s adaptation planning and policies.

Veronica Garibay and Ernesto Arevalo, Co-chairs

Addressing the Impacts of Climate Change in California

In California and around the world, average temperatures are warming and the climate is changing as a result of ongoing anthropogenic greenhouse gas (GHG) emissions. With California leading the way, significant efforts are underway to reduce GHG emissions and prevent the worst-case scenarios of climate change and its effects on people and the environment. Continuing leadership and action are imperative in this regard.

At the same time, California's people are already experiencing the effects of climate change caused by past GHG emissions, and even under the best-case scenarios of future emissions, we will continue to experience changes to our environment, communities, and way of life. California's leaders—including its public officials and its community and business decision makers—must take effective action *now* to address the social, economic, and environmental impacts of climate change and strengthen our resilience to anticipated future impacts.

What is Climate Justice?

Climate justice requires California leaders to ensure that the people and communities who are least culpable in the warming of the planet, and most vulnerable to the impacts of climate change, do not suffer disproportionately as a result of historical injustice and disinvestment.

Frontline communities that experience continuing injustice—including people of color, immigrants, people with lower incomes, those in rural areas, and indigenous people—face a legacy of systemic, largely racialized, inequity that influences their living and working places, the quality of their air and water, and their economic opportunities. Climate justice requires California leaders to acknowledge that these frontline communities are experts in creating solutions to protect and preserve our air, water, land, and communities, despite their historical exclusion from decision making and from public resources and services. Climate justice requires California leaders to provide public resources and services to frontline communities to engage and assist them in developing technologies, policies, professions, services, and projects for addressing the causes and impacts of climate change and healing from historical injustices.

Why Climate Justice?

While all Californians are impacted by climate change, climate change does not affect all people in the same way. These frontline communities are particularly vulnerable to the impact of climate and environmental changes because of decades-long, pervasive socio-economic conditions that are perpetuated by systems of inequitable power and resource distribution. Those systems, in turn, are the result of intentional decisions by people in positions of power and deeply institutionalized racism and class bias. These conditions and systems have left California's frontline communities with unsafe, unhealthy neighborhoods and limited access to quality education, public services, and economic opportunities.

Frontline communities have also long been excluded from the policy and funding decisions and processes that can be used to address climate change and support a transition to healthy, resilient, and sustainable communities. These communities are starting from a place far worse than that held by their more affluent, white counterparts, and accordingly have fewer resources to prepare for, adapt to, and recover from the effects of climate change. As a result, frontline communities are often the first and worst impacted by climate disruption and extreme weather events (e.g., Hurricane Katrina), which in turn increase already-present health and economic disparities.

The systematic and structural inequities experienced by frontline communities require an immediate, extraordinary, and sustained increase in public resources to these communities to build and ensure their resilience. Investments and services aimed at reducing disparities in training, employment, income, wealth, housing conditions, health, and political empowerment, and preventing displacement, will help to reduce frontline communities' vulnerability to the impacts of climate change. Moreover, such investments and services must seek to help vulnerable individuals and communities do more than "bounce back" from climate change-related harms: instead, they must support efforts to "bounce forward" to achieve full participation in an equitable, regenerative, and sustainable economy marked by inclusive engagement in decisions that affect daily life, with adequate resources to thrive before, after, and despite climate change impacts.

Climate Vulnerability and Climate Resilience

For purposes of this document, ***climate vulnerability*** describes the ways in which a person, community, or social system (a ***receptor***) is susceptible to sustaining harm or damage (***impact***) as a result of climate change. Climate vulnerability is a function of (i) climate-related changes in conditions that are experienced by a receptor; and (ii) the receptor's sensitivity to experiencing impacts as a result of those changing conditions. ***Climate resilience*** describes the receptor's ability and capacity to cope with or adapt to impacts caused by climate change.

Climate vulnerability is related to physical factors (e.g., whether a community is likely to experience increases in the frequency of dangerously high heat events, or to be flooded during more frequent or intense storms) as well as social and economic factors including:

- Inequities in access to and benefits of education, economic investment, social capital, health protection initiatives, and/or government services;
- Institutionalized bias or exclusion with respect to political and decision-making power;
- Disparities in environmental and living conditions; and
- Disparities in individual, family, and community health status.

Urban, suburban, and rural communities experience climate vulnerability, but may be vulnerable in different ways, depending on the context and on the relative presence or absence of the above factors. An individual or community may be vulnerable with respect to multiple factors of vulnerability at once. The cumulative effects of these factors may contribute to heightened vulnerability.

Advancing Climate Justice Through California's Climate Change Adaptation Policy and Funding Decisions

In recent years, California has made progress in acknowledging and addressing the need for climate justice in its greenhouse-gas reduction policies and investments, although it has far to go to achieve success in that regard. However, California state and local leaders have done little to acknowledge and address frontline communities' climate vulnerability, or to help build their resilience to the ongoing and anticipated impacts of climate change. California must do more. Accordingly, ***the Climate Justice Working Group offers the following vision, principles, and policy and funding recommendations to guide California's adaptation efforts through 2025.***

Vision

By 2030, we envision a resilient California where our most vulnerable communities are ready to respond to the physical, environmental, economic and health impacts brought on by climate change, and thrive after climate events. California must proactively bring public and private investments into vulnerable communities to foster robust and thriving communities that are engaged, healthy, just, economically viable, and safe from environmental threats.

Guiding Principles

1. Actively engage frontline communities in research, planning, implementation, education, and decision making about potential climate change impacts and about the development, funding, implementation, and evaluation of adaptation and resilience policies. Create enabling conditions for frontline communities' early, continuous, and meaningful participation in the development of adaptation policy and funding decisions. Partner with local leaders and community-based organizations to enhance the effectiveness of adaptation research and innovation, education, decision making, and policy implementation. *This overarching principle applies to all of the subsequent climate justice principles and recommendations.*
2. Identify and reduce frontline communities' vulnerabilities to climate change, with a focus on physical, economic, and quality-of-life factors.
3. When planning for infrastructure investments, prioritize actions that increase the resilience of essential facilities and associated services that provide health care, food, drinking water, evacuation routes, and emergency shelter for frontline communities. Reduce community health and safety risks from potential damage to sensitive facilities such as water treatment plants, hazardous waste facilities, and power plants and transmission lines.
4. Promote adaptation policies, funding decisions, and implementation actions that increase training, employment and economic development opportunities among frontline communities. Where applicable, prioritize opportunities that advance a "just transition" from dependence on fossil fuels and further enhance community resilience to the impacts of climate change.
5. Promote and support regional and local adaptation efforts that generate multiple benefits across sectors.
6. During planning and implementation of land use and community development decisions, consider and avoid negative consequences of actions, including displacement, that could inadvertently increase frontline communities' and individuals' climate vulnerability.
7. Promote adaptation co-benefits of toxic chemical and greenhouse gas reduction policies by supporting those that also reduce frontline communities' climate vulnerability and enhance their resilience.
8. Ensure that adaptation policies, funding decisions, and implementation actions comply with relevant laws and policies that are designed to protect and advance civil rights and environmental justice.

9. Promote local, regional, and state agency transparency, accountability, and adaptive management by developing and applying easy-to-understand climate justice metrics, data and information resources, and annual reporting protocols.
10. Identify needed funding, establish needed funding mechanisms, and allocate adequate funding to support adaptation policy development, implementation, and evaluation in frontline communities.

Policy and Funding Recommendations

- By 2020, California state agencies should complete regional cross-sector vulnerability assessments that:
 - Provide for frontline community members to participate meaningfully in processes of information-gathering, research, analysis, and review.
 - Identify and prioritize climate change-related threats to the region's frontline communities.
 - Assess how existing critical infrastructure and public services will handle changing conditions, and how the state can strengthen existing infrastructure and services, and develop new infrastructure and services, to enhance climate resilience and prevent displacement.
 - Determine how state agencies will integrate their climate justice policy development, planning, and implementation activities.
 - Provide direction and resources, such as funding and capacity building, to local and regional agencies on integrating climate justice in planning efforts, policy development and implementation, and distribution of resources. Ensure these local and regional agencies are also engaging frontline communities in their research, planning, implementation, and decision-making.
- By 2020, California state agencies should establish regional goals, targets, and implementation strategies for building climate resilience in frontline communities. These elements should be integrated into the state's 2020 climate change adaptation strategy. Areas of focus should include, but not be limited to:
 - Access to economic opportunities.
 - Access to public health facilities and services.
 - Access to safe and affordable drinking water and healthy food.
 - Access to affordable housing.
 - Access to natural resources, parks, and recreational opportunities.
 - Access to transportation.
 - Access to public funds and technical assistance.
 - Regional equity metrics that enable annual evaluation of progress toward resilience for frontline communities.
 - Estimates of funding needed to achieve climate justice for frontline communities in each region.

- By 2020, based on the regional assessments, updated adaptation strategy, and funding estimates California should immediately identify additional funding and funding mechanisms needed to achieve climate justice and equity for frontline communities.
- By 2020, California should identify, raise, and invest at least \$1 billion, and by 2025, at least \$10 billion through appropriate funding sources to:
 - Ensure frontline community members are involved in all aspects of climate adaptation and resilience policy research, development, planning, decision making, implementation, and evaluation.
 - Complete, for each region, community emergency preparedness plans, including maps and strategies for providing relocation and community services to frontline communities in case of disasters.
 - Make critical infrastructure and public service improvements in frontline communities consistent with regional assessments, goals, targets, and implementation strategies.
 - Develop an adequate supply of affordable, energy efficient housing in low-income and frontline communities.
 - Support a just transition to a non-extractive, clean energy economy in ways that provide multiple benefits to frontline communities, including job training, targeted employment, and generation of wealth and health.

An electronic version of this report can be found at the Healthy World for All website, www.healthyworldforall.org/ClimateChange.

Appendix

In December 2016, the Climate Justice Working Group completed a review of the 2016 *Safeguarding California* Implementation Action Plans and made recommendations for the 2017 Update of *Safeguarding California*. The working group recommendations follow.

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Climate Justice Working Group
Review of *Safeguarding California* Implementation Action Plans and
Recommendations for 2017 Update of *Safeguarding California*
Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here:

Agriculture

Working Group members who reviewed this IAP

Lead: Janaki Jagannath, Community Alliance for Agroecology
Veronica Garibay, Leadership Counsel for Justice and Accountability
Caroline Farrell, Center on Race, Poverty and the Environment
Lucas Zucker, Central Coast Alliance for a Sustainable Economy
Ari Neumann, Rural Community Assistance Corporation

Other community members and allies consulted in the course of this review:

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

The issues included in this IAP that addressed communities most vulnerable to climate change were drought, salt water intrusion, increased volatility in weather and increased heat stress, and soil health. Communities most vulnerable to climate change were only addressed in the *issues* section. None of the *programs* discussed in this IAP addressed environmental justice or needs of communities most burdened by climate change.

This is a result of historic lack of alignment between ag programs and addressing Environmental Justice. Lack of EJ planning and EJ staff at CDFA has meant that almost all recommendations until the introduction of the Health Soils Initiative have not had an intersection with environmental justice. Almost all programs mentioned present a voluntary measure and short-term monetary gain for growers but do not explicitly deal with safeguarding protected aquifers that serve as domestic drinking water supply for communities that are impacted first and worst by climate change and drought (although theoretically, on-farm water savings and energy efficient pumps might pose a long-term positive co-benefits to disadvantaged communities).

Some of the proposed climate adaptation strategies have negative consequences on environmental justice communities such as the Dairy Digester strategy. Dairy digesters in fact pose no clear improvement to localized air quality, as they do not rid the system of the lagoon/flush system that poses the greatest risk to localized ammonia emissions as well as groundwater contamination that comes from manure storage. The subsidizing of dairy digesters by the state promotes the consolidation of dairy operations along the trajectory to create biomethane and natural gas out of excess methane. The increased concentration of dairies already holds negative consequences for local quality of life, economic development, water and air quality, and local food security in rural California. Herd sizes on California dairies are appalling by global standards of dairy production: though boasting high production, most other large dairy producing nations around the world, and states across the U.S. using dairy digesters (Netherlands, India, and New York and Wisconsin respectively) have dairy cow herd sizes of around 200 head. Here in California, dairy

digesters receiving subsidy assistance from the state are 2,000 head and larger, and for this reason are some of the biggest emitters of methane into the atmosphere. The subsidizing of dairy digesters as a way to deal with an inherently non-sustainable dairy industry poses not an “adaptation strategy” but a ruse to maintain an ecologically unsound system in operation at status quo.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

Issues unaddressed in the IAP:

- There was no mention of geographic/topographical vulnerability of San Joaquin Valley/existing air quality and water quality and quantity challenges in agricultural heart of the state. The drought is exacerbating water quality issues and the warming trends are also increasing ozone forming air pollutants in already burdened areas and placing climate vulnerable communities at exponential risk.
- Extreme heat stress and mortality in the field (page 17). While the state has passed new heat protection regulations including breaks for farmworkers on high heat days over 95 degrees, enforcement is minimal due to a lack of presence of state labor agencies in rural communities as well as linguistic, cultural and immigration status barriers that prevent farmworkers from knowing their rights and reporting violations.
- Lack of appropriate and compliant farmworker housing for protection from elements (page 17)
- Pollution burden/ potential to mitigate pollution burden with increased soil health (page 18)
- Impacts on human health resulting from increased pesticide and herbicide use due to pest burden changes (throughout doc)
- Majority of the IAP’s strategy for aquifer sustainability is groundwater recharge during ‘periods of heavy precipitation’ to deal with current crisis. This is not an adaptation strategy but moreover a strong hope that the current meteorological and climactic conditions may change in the favor of agriculture (page 19) Suggestion: groundwater drilling and overdraft ordinances in and around vulnerable communities would be a more proactive approach.
- Expand on nexus of soil health and environmental justice: reduced nutrient loading on aquifer, reduced pesticide and herbicide use, local air quality NOx reduction, greater nutrient holding capacity. The Healthy Soils Initiative is the only clear resilience strategy in this document that holds promise of curbing climate change while offering a host of localized co-benefits. How will the Healthy Soils Initiative be targeted in DACs? In terms of evaluation, this program needs metrics around actual carbon sequestration in soils.
- Shifting to more perennial/orchard crops may be necessary, but may also negatively impact ag employment and wages. How can we ensure that measures are taken to improve ag sustainability and also create more and better jobs for farmworkers?
- No discussion of nor plan for food security in disadvantaged communities. No explicit mention of supporting small scale, biodiverse, and environmentally sustainable farmers who grow fresh fruits and vegetables for the state population.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

Many of the issues overlap with public health such as drought/pesticide use, water and air quality and agricultural land conservation and preservation. There is some discussion in the IAP about working with DWR on integrated regional water management, but issues ranging from pesticide and fertilizer use to saltwater intrusion affect drinking water supplies and

overlap with the Water Action Plan. The more chemicals that are used to deal with increasing pest burdens will result in greater concern for water quality. This must be incorporated into the Water Plan accordingly.

We suggest that this sector contain information about overall reduction in water usage for agriculture (the way that Dutch and Japanese national farming programs have cut water usage to respond to their water quality and drought challenges) rather than maintaining the status quo.

CalTrans conducts Vulnerability Assessments which may be a helpful strategy for this sector. Though Vulnerability Assessments were used to analyze pest burdens and to understand crop vulnerability to a changing climate, we suggest using the Vulnerability Assessment to understand how existing infrastructure may handle volatile weather conditions and what the state may do to maximize return and resilience from current infrastructure.

This IAP also has significant overlap with the Biodiversity Action Plan. The need to protect pollinators, the changes in pest burdens, and the impact of pesticides/herbicides on wildlife should be taken into consideration in conjunction with the Agriculture Action Plan.

Though containing listing of the CDFA Specialty Crop Block Grant, this plan's most obvious and glaring gap is the lack of support for diversified farming in the state and specialty crop farmers of a variety of scales which will secure California's food supply in the long term and protect land, air, water and pollinators.

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

The focus on the agricultural section is on working with growers, but there also needs to be inclusion of farmworkers (independent from their employers) in the plan around adaptation. The strategies named in this plan should be forward thinking and incorporate a transition to agroecological farming methods which have been understood to be more climate resilient and protective of local food security. We recommend an agroecological framework to build small-scale farming into this plan to ensure that local populations continue to have a stable food source, farming with natural cycles, and protection of pollinator habitat become core vocabulary in California's climate adaptation strategy in the Agricultural Sector. CDFA Specialty Crop Block Grant is the only named program in the state meant to support small scale and environmentally sustainable farmers. This support structure must be highlighted as its own piece of the strategy, and must be incorporated in California's framework to transition agriculture towards ecological balance.

Recommendations to substance and structure:

- The structuring of the IAPs by sector is not as useful to see how the policies may work together. We suggest that these Plans be broken up by region rather than sector to understand holistic impacts on quality of life, health, economy, environment and other issues.
- The Ag Sector in general needs to engage rural communities/farmworker communities and advocates in different forums than growers. These programs consistently do not have attention for impacts to farmworkers because administrating agencies (CDFA, DWR) do not historically consider impacts to

Disadvantaged Communities in their grant processes. This needs to change through concerted outreach to these groups.

- The state needs to start figuring out how to budget for meaningful engagement: this includes childcare, food, and making meetings at a time that is accessible to residents.
- Translation services should be provided from CDFA in Spanish, Hmong and Punjabi and other languages spoken by the small farmer population. To this day, CDFA still relies on an underfunded network of UC Cooperative Extension Small Farms Agents to translate and disseminate this information. If this is the best way forward (as these agents are indeed highly effective and competent), this work needs to be budgeted for and compensated to extension agencies.
- Explicitly support small scale and environmentally sustainable farmers who grow fresh fruits and vegetables for the state population.

Overarching Questions:

- What is the outreach plan to disadvantaged communities from CDFA around dairy digesters as an adaptation strategy?
- Dairy digesters are not uniformly understood as an adaptation strategy and in fact pose a potential risk to climate adaptation for rural community residents living around California's mega-dairies. Transforming our mega dairies into power plants comes with very critical challenges for local community health and risk management. How will this potential hazard be dealt with?
- How is this plan dovetailing with Public Health and Water in terms of use of chemical based strategies to deal with new pests as a result of climate change (resulting farmworker and community health risks)?
- The programs mentioned are providing monetary gain in short term for growers, rather than enforceable programs to get them to change their behavior. How will these programs ensure intersection with environmental justice in the long and short terms?

Climate Justice Working Group
Review of *Safeguarding California* Implementation Action Plans and
Recommendations for 2017 Update of *Safeguarding California*
Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here:

Biodiversity and Habitat

Working Group members who reviewed this IAP

Lead: Janaki Jagannath, Community Alliance for Agroecology

Other community members and allies consulted in the course of this review:

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

The issues included in this IAP addressed plant and animal communities most vulnerable to climate change, expressed further research into impacts created by the drought, salt water intrusion, increased volatility in weather and increased heat stress. The IAP mentioned vulnerable plant communities and the UC Davis mapping study of California vegetative communities. The IAP did not discuss any intersection with people: tribal communities, rural working populations living in and around conservation sites, economic impacts of conservation strategies, or engaging the private sector in habitat and biodiversity conservation. None of the *programs* discussed in this IAP addressed environmental justice or needs of communities most burdened by climate change, or tribal communities.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

Issues unaddressed in the IAP:

- Working with Tribes or participation by California Tribal Affairs Department to engage native communities around ecological restoration and habitat preservation.
- Geographic/topographical vulnerability of San Joaquin Valley/existing air quality and water quality and quantity challenges in already stressed regions that make habitat restoration a challenge without significant state investments.
- Drought in already stressed regions exacerbates water quality and quantity issues and creates a feedback loop where water shortage leads to greater pumping depths, compromising, and in some cases collapsing, water systems.
- Impacts on agriculture on habitat loss, loss of farmland and land-use trends that are occupying more natural habitat for housing and other urban and suburban development.
- Soil biodiversity and conservation was not mentioned.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

The document should outline how loss of habitat through climate change impacts have consequences for California communities such as loss of jobs in rural communities, potential loss of a stable food source, and loss of cultural resources for indigenous communities.

We suggest that protection of native pollinator habitat become core vocabulary in California's climate adaptation strategy in the Agricultural Sector *and* the Biodiversity and Habitat Sector plans, and that this IAP include information on the state's efforts to preserve pollinator habitat through the Department of Pesticide Regulation and the California Department of Food and Agriculture. We suggest a mention of working with agriculture to transition agriculture towards ecological practices that safeguard protected aquifers and soils in the long-term.

There was no mention of the State's working group on Carbon Sequestration on Natural and Working Lands led by the California Department of Food and Agriculture and the California Natural Resources Agency. This effort speaks to the climate resiliency tools being investigated by the State that triangulate conservation management, private sector partnership, and biodiversity and habitat protection, particularly in the area of forestry. This working group is investigating ways to create economic opportunity for working families out of the crisis of climate change, a keystone of building resilience and safeguarding California. Other such workgroups and efforts should be mentioned in this IAP.

Many of the issues in this IAP overlap with public health and water and air quality and agricultural land conservation and preservation. Due to agency collaboration and legal stratification, we suggest that there be some clarification regarding the applicability of the strategies in this IAP to working lands. There is some discussion in the IAP about working with DWR on the Sustainable Groundwater Management Act but there is no discussion of Federal Endangered Species Act and its impacts on surface water usage in California. These issues in turn have subsequent impacts on drinking water supplies and overlap with the Water Action Plan.

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

This IAP outlined many excellent efforts by the state to further study the impacts of climate change on vulnerable taxa and administrative efforts to train the department in climate change impacts. The IAP as a whole discusses mitigation of the worst impacts of climate change and restoration efforts to protect endangered and at-risk species. The references to the State Wildlife Action Plan are very useful for these purposes. It may be helpful for the department to analyze some of the resilience strategies that are a part of other IAPs and identify how they may interact with vulnerable species and habitat, and use them to build an environmental justice and tribal affairs outreach strategy. The outstanding example included in the document is the mention of the Wetlands Restoration program through GGRF and the Sustainable Groundwater Management Act. These programs and policies intersect with biodiversity and habitat conservation and was aptly mentioned that they are meant to target areas of high vulnerability. Similarly, it would be fitting for this IAP demonstrate a deeper dive into the array of other important policies and programs that function in conjunction with some of the goals for biodiversity and habitat conservation.

Some of those programs, in addition to already mentioned SGMA are

- Sustainable Agricultural Lands Conservation Program – Strategic Growth Council, focused on the preservation of vulnerable farmland.
- Healthy Soils Initiative – promoting the conservation of soil as a functioning biological system, preserving habitat for pollinators, vertebrate species, and soil microbial communities.
- CalFIRE Urban Greening aimed at creating and restoring species habitat while bringing down GHG

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Emergency Management Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here

Emergency Management

Working Group members who reviewed this IAP

- Ameer Raval, Asian Pacific Environmental Network
- Caroline Farrell, Center on Race, Poverty & the Environment

Other community members and allies consulted in the course of this review

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

Issues addressing the needs of communities most vulnerable [consensus]

Vulnerable communities are not specifically addressed in the plan. Vulnerability is mainly described in the context of infrastructure, facilities, and climate effects, but not specific communities or regions. For example, pg. 57 includes a paragraph on the “vulnerability of community resources to climate risks” and “grassroots resilience”, but does not specifically define or outline what these resources are.

From an EJ perspective, infrastructure damage to **roads, healthcare facilities, schools, food banks, community centers, churches, emergency shelters, emergency facilities, wastewater treatment plants, hazardous waste facilities, and power plants** could be particularly detrimental to vulnerable communities that rely on community services or live in close proximity to hazards.

Principle Challenges [consensus]

Prioritizing the **resilience of essential facilities** will require community-driven mapping to identifying what these services, where they are located, and what resources can be directed to ensure these community resources can respond during extreme weather events.

Similarly, in the case of **hazardous facilities**, mapping (potentially using CalEnviroScreen as a starting point) could support identifying such hazardous facilities that could pose significant harm during extreme weather events. These hazardous facilities include, but are not limited to, toxic cleanup sites, groundwater threats from leaking underground storage sites and cleanups, hazardous waste facilities and generators, solid waste sites and facilities

hazardous waste sites, impaired water bodies, areas of high pesticide usage, power plants, and oil and gas facilities. Developing action plans, in response, could outline contingency efforts to ensure that EJ communities are protected from emerging threats in emergency situations.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs? [consensus]

- There is very little that directly discusses the issues that affect vulnerable communities: language access, proximity to particular hazards, culturally appropriate medical care, etc. For example, on page 54, there is a discussion on impacts from surface air temperature increases. In addition, we have learned from emergency responses to pesticide drift incidents, that we need better protocols and training for local emergency response. There was little information or notice on what chemical was used and what the appropriate treatment would be. Also, there were issues with payment for services. Many farmworkers have been forced to pay for treatment for pesticide exposure for which they were not responsible. These issues are not really addressed apart from discussion of insurance for owners, but what if people do not have insurance?
- It would be particularly useful to explicitly identify vulnerable communities in this section, since this will clearly affect emergency response efforts. These include¹:
 - **Disadvantaged and low-income households** that are less likely than their counterparts to be able to afford emergency preparedness materials, buy insurance policies, and obtain needed building reinforcements. In regards to wildfire risk, low-income households are also less likely to live in homes that meet or exceed building codes, have non-flammable roofing, or have a defensible space free of flammable material. They are more likely to lose more or all of their assets in a fire and are less likely to have adequate insurance to cover the cost of rebuilding or replacing personal property.
 - **Renters** are less likely reinforce buildings and buy insurance because the decision to make major improvements and financial gains typically lies with the property owner.
 - **Linguistically isolated households** are the most likely to need preparedness materials and outreach strategies suitable for non-English speakers of various backgrounds
 - Households with **lack of access to vehicles** will be more vulnerable to the adverse climate effects due to their increased chance of lacking the transportation means necessary to evacuate.
 - **Perceptions of emergency response workers** toward neighborhoods that are predominantly people of color can increase the vulnerability of these communities. The areas with the highest concentrations of people of color are more likely to be subject to problems with stereotypes that may result in less effective emergency services.

¹ Heberger, M., Cooley, H., Herrera, P., Gleick, P. H., & Moore, E. (2009). The impacts of sea-level rise on the California coast. California Climate Change Center CEC-500-2009-024-F. <http://pacinst.org/app/uploads/2014/04/sea-level-rise.pdf>

- Other indicators include: **air conditioning ownership, health insurance coverage, elderly living alone impervious surfaces, unemployment, and outdoor workers.**
- **Climate risk is a function of exposure and vulnerability** and both should be integrated and analyzed together (as proposed on pg. 64). For the purposes of better targeted emergency management, statewide mapping of climate projections should be overlaid and considered alongside vulnerability indicators (such as those mentioned above). A full list and data sources for these indicators has been compiled by the California Energy Commission's Climate Change Center². Since climate effects are inherently regional, it would be most useful to create regional maps. However, a guide and recommendation to create these maps should be provided by the state.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector? [consensus]

- There is a lot of overlap with **land use issues**. It would be good to coordinate efforts to map hazards with efforts like CalEnviroScreen so emergency responders know what types of hazard they need to plan to deal with- pipelines, refineries, waste lagoons with dairies, hazardous waste facilities- all of which are usually located in environmental justice communities and exacerbate emergency issues. In addition, how are facility emergency response plans that are often required as permit measures incorporated into state-level emergency response plans?
- In terms of **evaluation metrics**, there should be metrics related to community engagement and how impacts to vulnerable communities were addressed and overcome i.e. quality of care, language access, and equitable response to emergency based on demographics in the community.
- As part of the **four-phased approach**, EJ concerns can be integrated in the following ways:
 - **Preparedness:**
 - Building **public awareness and community outreach** through culturally and linguistically appropriate material to communicate the risks of extreme weather events and implement practices to prevent adverse outcomes through public campaigns and educational material targeted in vulnerable communities.³
 - Supporting the development of local/regional **early warning systems** to alert residents of predicted extreme weather events. In order to reach diverse communities, these must be **multilingual** and **widely accessible** (similar to the ubiquity of Amber Alerts).
 - Formal **communication channels** should also be established specifically for EJ communities to alert local agencies, health officials

² SOCIAL VULNERABILITY TO CLIMATE CHANGE IN CALIFORNIA - A White Paper from the California Energy Commission's California Climate Change Center. <http://www.energy.ca.gov/2012publications/CEC-500-2012-013/CEC-500-2012-013.pdf>

³ NRDC. 2016. Ahmedabad Heat Action Plan 2016: Guide to Extreme Heat Planning in Ahmedabad, India.

and hospitals, emergency responders, local community groups, and media outlets of forecasted conditions.⁴

- **Response:**

- Capacity-building among healthcare professionals to recognize and respond to climate-related illnesses (i.e. heat stress, and waterborne illnesses, wildfire conditions). Such trainings could focus on community health staff so they can effectively prevent and manage climate-related cases to reduce mortality and morbidity.
- Prioritize the input of community and EJ advocates in many of the coordination and planning decision-making spaces outlined in the report (such as for the SHMP and THIRA) to effectively and equitably deliver emergency preparedness and response resources (pg. 59-60).

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California? [consensus]

- Perhaps a better way of supporting community engagement is by creating **regional plans** that discuss specific regional adaptation issues with the programs that might best address them. This might be better than a statewide discussion broken down by sector. All of these sectors need to work together in particular regions to reduce impacts. For this reason, a regional planning document may be more useful. Different approaches and programs will be needed in each region. A regional approach is also needed to assess vulnerability and conduct targeted outreach and planning.
- A strong starting place to understand vulnerable communities is the **CalEnviroScreen tool**, which ranks communities according to their exposure to pollution from multiple sources and the vulnerability of the resident population to its effects. This mapping begins to raise public visibility of the interests and needs of disadvantaged communities for the purposes of targeted investment from cap-and-trade revenues.
- A recently published report recommends developing a **statewide public accountability system to track equity outcomes**. It specifically notes that “the state should develop an annual Climate Equity Report based on tracking equity outcomes to enable state officials to monitor whether equity goals have been reached, to identify areas where climate policy should be improved to advance equity, and to hold public bodies accountable for progress on equity in climate resilience measures.” Equity goals and criteria have been outlined in this report and broadly include environmental justice, economic equity, and public accountability.⁵
- The Safeguarding team has done an excellent job of recognizing which voices should be at the decision-making table and building internal processes to ensure that

⁴ Ibid.

⁵ Advancing Equity in California Climate Policy: A New Social Contract for Low-Carbon Transition. <http://laborcenter.berkeley.edu/pdf/2016/Advancing-Equity.pdf>

participation has real influence in decision-making. In operationalizing the activities outlined in the sector plans, we recommend that administering agencies should **extend participation to all stages of decision-making** in legislative, regulatory, and enforcement initiatives, including on-the-ground data collection and analysis, problem identification, policy formulation, and implementation planning, evaluation, and oversight activities.⁶

⁶ Ibid.

Climate Justice Working Group
Review of Safeguarding California Implementation Action Plans and
Recommendations for 2017 Update of Safeguarding California

Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here:

Energy

Working Group members who reviewed this IAP:

Lead: Gloria Walton, SCOPE, Laura Muraida, SCOPE

Co-reviewers: Ameer Raval, APEN; Lucas Zucker, CAUSE; Ernesto Arevalo, CBE; Sona Mohnot, Greenlining Institute

Other community members and allies consulted in the course of this review:

Shana Lazerow, Communities for a Better Environment

Greenlining Institute's Energy & Enviro Teams

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

The programs and issues mentioned in the Energy IAP that address the needs of vulnerable communities include: targeted programs that diversify energy supply in low-income households and communities (CA Solar Initiative for single and multi family); targeted demand side measures for low-income households and communities (Low-income weatherization program); targeted water efficiency programs in disadvantaged communities (GGRF funding pending); research on cost-effectiveness

Principle Challenges:

- Significant financial, programmatic, and administrative barriers exist for renters and low-income households to access and benefit from rooftop solar and community solar programs. There is a need to expand current solar opportunities for these customers. The Energy IAP should ensure: 1) economic benefits of solar reach tenants as well as building owners; and 2) a coordinated delivery of energy efficiency and solar. The Energy IAP should also identify sources of funding to support community solar for low-income customers. We recommend that the Energy IAP consider and integrate the CA Energy Commission's recommendations to address these barriers ([see SB 350 Barriers Study](#) and [Recommendations](#) 1-4).
- Community solar programs offer the opportunity to overcome structural barriers for renters, apartment dwellers and households with older rooftops as well as provide benefits to customers, including lower costs, energy savings, and local jobs. The Green Tariff Shared Renewables Program, which designates 100 MW of generation in disadvantaged communities, has potential and with small modifications may provide greater direct benefit for residents in disadvantaged communities and low-income Californians. It is crucial to address fixed charges that make the current program prohibitively expensive for low-income households. Moreover, renewable energy programs must be grounded in equity and ensure substantial tenant benefits.
- Programmatic, funding and financing barriers exist for deep & comprehensive energy and water efficiency retrofits for low-income households, small businesses & diverse business enterprises, which predominantly serve low-income communities

- Limited funding exists for targeted low-income and disadvantaged community programs:
 - Limited funding is especially problematic for multi-family housing. The time frame in which the money must be spent is too short. Most programs require spending the money within a year, but most multi-family projects involving intense energy efficiency and solar take longer than one year to complete, so many property owners will not take the risk at all. Programs for multi-family housing need a longer allowable window in which to spend the money.
 - Implementing deep energy efficiency retrofits on tenant units is disruptive. However, in many low income buildings, there is a lot of turnover. A longer window of time to spend money will allow retrofits to happen between tenants, rather than disrupting a current tenant.
 - *Example:* AB 693 (Eggman) created the Multifamily Affordable Solar Roofs Program investing \$100 million annually over the course of 10 years for renters to access and benefit from solar projects through bill savings as well as other economic benefits, such as local hiring provisions. Specific program design elements will be determined at the release of Proposed Decision in 2017.
- There is a lack of dedicated research on targeted benefits, technology deployment, and access to affordable technology in low-income households and disadvantaged communities
 - We recommend exploring the use of electric vehicles as a mode of storage (vehicle to grid), or using excess solar generation, and potentially providing other ancillary grid services. Other storage options, like the Ice Bear system could help place less stress on the grid especially during hot summers when there is reliance on air conditioning in higher temperature regions.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

The Energy IAP lacks mention of:

- Actionable steps as part of a cohesive and comprehensive plan that guides coordinated program development and implementation
- The impact that climate change has on the advancement of equity and the potential increase in the number and vulnerability of low-income communities. This includes the rising cost of utility bills and other economic impacts of climate change on the household and macro level.
- The corporatization of public utilities that prioritizes business continuity and cost-effectiveness over the basic needs of communities. There is a need to explore new, democratic clean and local energy models that empower, invest in, and are shaped by communities and prioritize the environmental and economic health of residents.
- There is no focus on energy and utility sector workers or consideration of developing and supporting a just transition (for workers, customers and communities) to a clean energy economy. This includes:
 - Changing workforce training and education needs in the energy and utility sectors
 - Investment in a transition fund for workers in fossil fuel industries to receive support for training, job transition assistance, and other relevant needs
 - Targeted training and job placement opportunities that ensure local disadvantaged workers and workers with barriers to employment have opportunities to gain employment in the energy and utility sectors, and other growth sectors driven by the transition to clean energy

- Programs that direct investments in renewables into geographic areas where oil and gas production is a major employer to ensure that communities who will face greatest economic impacts from the transition away from fossil fuels receive the benefits of employment in the clean energy sector
- Discussion of what happens to old fossil fuel infrastructure as we transition out of oil and gas. Abandoned oil wells, power plants, and refineries are left to rust in environmental justice communities, sometimes by companies that have gone bankrupt and whose shareholders no longer have a legal obligation to remove them or remediate the land, sometimes by still-profitable companies who simply feel no moral obligation to pay millions in cleanup costs. These abandoned structures create barriers to environmental restoration in EJ communities and encourage continued development of dirty industry adjacent to them.
- There is a lack of focus on environmental justice (EJ) communities:
 - There is a distinct vulnerability of EJ communities to surges and power outages that should be explicitly mentioned and considered.
 - This plan does not assess the impact of the possibility of EJ and vulnerable communities being trapped by energy infrastructure. Downed power lines could have a significant impact on these communities that already lack access to resources during emergencies.
 - There is no specific mention of using race as an indicator for vulnerability or any use of existing measures/metrics for vulnerability, such as the CalEnviroScreen 2.0.
- The lack of deployment of emerging technology in disadvantaged and low-income communities:
 - The hardening (improving the durability and stability) of energy infrastructure could lead to infrastructure that will be less hazardous for communities. For example, underground and microgrid technology would shift the reliance on pole lines to an underground cable grid. Deployment of new technology in disadvantaged communities should be prioritized.
- The need to bring in gas/electric utilities as stakeholders in adaptation policy planning. Energy utilities must invest substantially in adaptation strategies *now*, not when it's too late and disasters have already occurred. Investments must prioritize low-income communities of color.
 - Not only are utilities not going anywhere, but they are also the only entity in the energy landscape with a requirement to serve *all* customers. Utilities may be our only option for getting clean energy into some hard to reach communities where the private sector does not want to invest.
- The Weatherization Assistance Program is mentioned, but not the Low-Income Weatherization Program (LIWP) as administered through Greenhouse Gas Reduction Fund or the Low-Income Home Energy Assistance Program (LIHEAP)
- There is also no mention of the electrification of ports and ships through solar and cold ironing as a method of protecting communities residing next to ports from ongoing emissions.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

- The CA Energy Commission developed useful well-researched recommendations outlined [here](#) in response to the barriers identified above with significant input from environmental justice advocates and vulnerable communities.
 - Include a One-Stop Shop model recommended by the CEC in the 350 Barriers Study Recommendations, where agencies coordinate to provide building

owners, tenants, and small businesses in low income communities with energy efficiency, clean energy and water upgrades through a “one-stop” comprehensive program. The program must provide technical assistance, education, outreach, and offer individualized guidance to customers based on their needs.

- Data collection: establishing metrics to measure the reach of renewable energy programs; energy & water efficiency upgrades; infrastructure siting and upgrades
 - Data collection should include demographic data that is standardized across programs and collected by all, so we can see who is benefiting and who is not
 - Standardized metrics for health and economic co-benefits for energy efficiency and renewable energy projects would help characterize benefits. This should not be framed as “non-energy benefits”, rather co-benefits (pg. 79)
- A data-driven equity analysis of programs and pilot projects currently available
- A dedicated labor and workforce program area could help identify the changing workforce needs in the energy and adaptation infrastructure sectors
- Funding for deployment of demonstration technologies and pilot projects in disadvantaged communities, including microgrids, energy storage, Zero Net Energy buildings etc.
 - This IAP must encourage the CEC to find opportunities to bring microgrid technology into low income communities of color, *and* to target deployment/demonstration of this technology in these communities. Demonstration programs should target at least 25% of technology demonstration and deployment funding for sites located in and benefiting disadvantaged communities.
- Research on barriers and solutions to program cost effectiveness, implementation and adoption in low-income and hard to reach communities
- There are important cross linkages with the Land Use and Community Development and Emergency Preparedness sector IAPs, and useful metrics and/or recommendations have been put forth in these IAPs that could be useful to the energy sector.
- A full economic and health analysis of the impact that threats and changes in the energy sector will have on customers, and low-income and fence-line communities in particular:
 - In California’s power sector, the electricity sources that tend to generate the most pollutants – gas-fired peaker plants that are called on to start and stop – are located in or near environmental justice communities. One recent study shows that more than 80% of peaker plants are in communities with above-average CalEnviroScreen scores, and more than half of these plants are in communities in the top 30% of CalEnviroScreen communities. Due to the localized effects of air pollutants, there is a direct correlation between living near power plants and adverse health effects, with the heaviest health burdens falling on these disadvantaged communities. According to this study, the siting and dispatch of energy storage, demand response, residential renewables, and efficiency have the potential to displace peaker plants, which are among the highest-rate air pollutant emitters on the California grid and are anticipated to be triggered more often by the impacts of our changing climate. An economic analysis of the utility of gas-fired generation, as well as an economic analysis of health impacts, must inform projected reliance on gas-fired generation. These analyses must look to the transition to renewable energy, and appropriately value renewable energy systems.
- We recommend that inclusive, non-debt based financing be available for low-income customers who are interested in implementing clean energy projects at their

residence. The development of financing pilot programs create actionable opportunities to overcoming the barriers presented by lack of capital and credit.

- The IAP needs a system to identify vulnerable communities that will disproportionately suffer from climate change impacts (warmer temperatures and increased energy demand). While there isn't complete agreement of which tool to use, we recommend agencies utilize CalEnviroScreen to identify community vulnerability, and perhaps other tools such as the Environmental Justice Screening Method to identify climate change threats. Agencies must include accurate and relevant data as they develop climate adaptation plans and policies.
- Investing in advanced storage systems for essential facilities like food banks, emergency shelters, community centers, and churches could support emergency preparedness and response during power outages.
- Local zoning or state policy preventing energy infrastructure from being built on coastlines projected for sea level rise, particularly those serving disadvantaged communities, as flood events can cause loss of power during emergency. As mentioned in the IAP, California has many coastal power plants due to former need for seawater cooling, which is no longer technologically necessary and will be banned post-2020, yet the energy industry owns land, has industrial zoning, and runs power lines, to these sites, therefore continuing to build power plants on the coast. While this IAP mentions this problem, it does not make clear recommendations to address it.

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

- An equity analysis of each sector is needed, particularly because climate change exacerbates existing inequalities
 - Sectors should include discussion on the "climate gap" that explains the multiplier effect of climate change on pre-existing economic and health inequities in low-income communities of color
- Looking forward to labor and workforce implications of changing sectors and the economic and job opportunities created by adaptation strategies
- Development of an authentic community engagement process and community oversight of action plans
 - Make information about climate change impacts more accessible to vulnerable populations. Increase education on climate adaptation in vulnerable communities, with extra resources and consideration given to linguistically isolated communities (outreach in multiple languages).
 - Community-based organizations (CBOs) are critical partners for program outreach, education, as well as workforce development by building upon local networks of trust. It is important to leverage and allocate resources to draw upon the experience and expertise of CBOs. Designating funding for these activities enables meaningful involvement of and collaboration by CBOs to deliver clean energy programs. An immediate first step could be to launch this type of genuine engagement through existing energy programs targeted to EJ communities.
- Directing the CEC and PUC use an environmental justice lens or criteria in public participation efforts and prioritization of future projects and investments
- Ensuring anti-displacement guidelines and policies are prioritized when renewable energy and energy efficiency investments are made in EJ communities

**Climate Justice Working Group
Review of *Safeguarding California* Implementation Action Plans and
Recommendations for 2017 Update of *Safeguarding California***

Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here

Forestry Sector

Working Group members who reviewed this IAP

- Lead:
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Alvaro Sanchez, Greenlining Institute
- Co-reviewers:
Ari Neumann, Rural Community Assistance Corporation
Eleanor Torres, Incredible Edible Community Garden

Other community members and allies consulted in the course of this review

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

1. CalFIRE will prioritize urban forestry investments toward DACs

We are pleased that the IAP states that CalFIRE will make urban forestry investments prioritized toward disadvantaged communities. We fully support this policy because DACs disproportionately suffer from the impacts of climate change compared to other communities, and therefore their needs should be prioritized in climate adaptation policies. Challenges to implementation of this policy include: ensuring that funding remains available for CalFIRE programs in the future, and that the investments are prioritized in low income communities. The IAP must find ways to make sure that low income communities benefit from state adaptation efforts including urban forestry and green infrastructure. These adaptation strategies can provide long-term economic and health benefits to vulnerable communities.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

1. Impacts from Wildfire on Rural Communities and Tribes

Increased risk of wildfire is a climate change impact that we are seeing in California. Rural communities and tribes are most at risk from wildfires due to their locations, especially in Northern California. However, the IAP generally fails to incorporate tribes into its plans and policies. The IAP needs to better address how it will make sure these communities are prepared pre-disaster for wildfires, and also have post-disaster policies in place to ensure communities can return to their homes after wildfire events. For example, the IAP must address how it will protect sources of drinking water from pollution and contamination that can result from wildfires in rural disadvantaged communities. Wildfires can also result in loss of jobs for rural and tribal communities, and impact their ability to earn a living. The IAP

must assess the economic impacts from wildfires on rural communities and tribes, and offer strategies to help these communities revive after extreme weather events.

2. Maximize cross-sector benefits from forestry actions

The Forestry IAP should work with the Energy IAP and Public Health IAP to maximize co-benefits. The Forestry IAP discusses how urban forestry is associated with many cross-sector benefits. Forests can provide vulnerable communities with cooler temperatures, reduced energy costs, reduced air and water pollution, and improved public health. For example, the IAP discusses that urban heat islands disproportionately impact disadvantaged communities. However, expanding tree canopy cover in urban areas can provide energy and public health benefits such as natural cooling, improved health outcomes, and reduced energy consumption.

We recommend the development of a cross-sectoral strategy that focuses on implementing actions that produce benefits across multiple sectors. The Forestry, Energy and Public Health IAPs must collaborate and strategize how to coordinate with relevant state agencies to maximize the goals of all the sectors. The actions must specifically discuss how cross-sector benefits can address the needs and concerns of vulnerable communities.

3. Identify Initiatives Outside of *Safeguarding California* that can Provide Multiple Benefits

We recommend the state find ways for urban forestry policies to coordinate with external (non-Safeguarding) initiatives to provide co-benefits for vulnerable communities in urban areas. For example, urban forestry and green infrastructure can provide long-term benefits for stormwater management. Trees can decrease the amount of stormwater runoff and prevent pollutants from reaching local waters.⁷ Many cities have funding for stormwater management but not for urban forestry programs. The state should use existing stormwater management funding to implement urban forestry projects because they will help manage stormwater *and* provide the health and energy benefits listed above. In this way, the state can utilize existing funding sources to achieve multiple goals across multiple sectors.

Los Angeles can offer a model for other cities in California to use. Los Angeles has a stormwater tax⁸ (The Stormwater Pollution Abatement Charge) that pays for the City's stormwater management program. The funds from the tax pay for flood control projects and system maintenance and upgrades, and pollution abatement programs and projects. Such a tax can be used to invest in forestry projects to help with stormwater management.

We also recommend the state identify opportunities where external sectors can work with the forestry sector to create job opportunities. For example, many employees in the water utility workforce are approaching retirement, and water utilities need to recruit new hires. The water utilities can use this as an opportunity to create career pathways for people with barriers to job entry. The utilities can invest in entry-level forestry jobs, and eventually provide training to these employees for water utility jobs that offer livable wages. The state should look for similar opportunities where investments in forestry jobs can lead to well-paying jobs for people with barriers to entry.

⁷ <https://www.epa.gov/sites/production/files/2015-11/documents/stormwater2streettrees.pdf>;
<http://www.ecosystemmarketplace.com/articles/fixing-water-fixing-forests-building-successful-watershed-investments-programs-us/>

⁸ <http://www.lastormwater.org/about-us/funding/>

4. The Forestry Sector IAP Should Complement Natural Resources Agency's Urban Greening Program

NRA's Urban Greening Program has \$80M in funding, 75% of which must benefit DACs. The program aims to benefit DACs by increasing access to green space, planting trees and engaging in other green infrastructure initiatives. We recommend the forestry sector IAP look at what the Urban Greening Program is doing and find ways to collaborate with and/or complement the program.

5. Comments on California Forest Biomass Working Group

The California Forest Biomass Working Group should include a member specifically assigned to issues of environment equity and environmental justice, such as potential health and pollution impacts resulting from proposed biofuel facilities. The working group should also include representatives from impacted communities to make sure their needs are being heard and addressed.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

1. Financing Opportunities

As the state moves forward with ambitious goals to combat impacts of climate change, it must recognize that regional agencies may not have adequate resources to address impacts. The state must play a more proactive role in providing support, guidance and best practices to agencies. For instance, the state must develop and implement "smart growth" policies to reduce exurban sprawl into forests. More sprawl into forests will require CalFIRE to stretch its resources even further as the agency tries to protect all houses that could potentially be impacted by wildfire. Local, regional and state forestry agencies must convene to assess and recommend changes to current and future forestry program funding sources and determine (1) how they align with state climate adaptation goals and (2) how they prioritize the needs of vulnerable communities.

Additionally, the SGIAP needs to identify actions that meet goals of climate mitigation and climate adaptation, particularly in vulnerable communities. Projects funded by the GGRF can have adaptation co-benefits for vulnerable communities. The state must seek funding opportunities from private and public sources to make meaningful climate adaptation investments. Sectors should implement actions that can simultaneously reduce GHG emissions and also make vulnerable communities more resilient.

As the state identifies funding sources for climate adaptation, it must take into account the extra resources vulnerable communities may need, such as outreach in multiple languages and technical assistance needs.

2. Safeguarding California Must Prepare for Unintended Adverse Consequences and Include Adaptive Management Strategies

Every sector plan must incorporate strategies that prepare for unintended negative consequences, such as displacement, that may occur when vulnerable communities are forced to relocate during extreme weather events. A model to follow is the Scoping Plan that ARB is required to prepare under AB 32 to explain California's approach to climate mitigation. The Plan requires ARB to evaluate the environmental and public health impacts of the Scoping Plan. *Safeguarding California* needs to include a similar mechanism that assesses impacts resulting from climate adaptation policies. Mechanisms such as adaptive management strategies can help address unintended negative impacts and allow for flexible changes in the future.

In the forestry sector, the state must determine how vulnerable communities will be impacted by biofuel production facilities. Local, regional and state agencies should be required to conduct an adverse impacts assessment prior to constructing new biofuel refineries. The assessment must look at where the facilities will be cited, what types of pollution and/or water contamination will result from the facility, how adjacent communities will be exposed to pollution, and what health impacts may result from the processes necessary for biofuel production.⁹

Agencies should not fund projects that may result in extreme harm to vulnerable communities; they must find ways to reduce harm such as by including adaptive management strategies. The adverse impacts review process should be integrated into the policy planning process.

3. Forestry IAP Must Identify Potential Economic Co-Benefits Resulting from Forestry Plans

We find that *Safeguarding California* is an opportunity for the state to not only prepare communities for climate change, but also reduce the racial wealth gap by targeting economic investments in low income communities of color. All IAPs must leverage public funds to prioritize economic opportunities into vulnerable communities. In this IAP, implementation of forestry programs will require jobs in forest management, tree planting and infrastructure development. CalFIRE should use policies and programs funded with public money (i.e. Urban and Community Forestry Program) to create jobs with livable wages, training and contracting opportunities for businesses in vulnerable communities. For example, Funding Guidelines for programs funded by GGRF require at least 25% of the project work hours to be performed by residents of a disadvantaged community. CalFIRE should similarly include minimum requirements for program work hours for disadvantaged communities.

In addition, if resources (timber, biomass) are extracted from rural communities, at least 50% of benefits derived from resource extraction should go into the community. Fuel contracts should also go into the community, especially if resource extractors utilize public roads or other infrastructure. Furthermore, resource extractors should pay to maintain and/or upgrade infrastructure that they place strain on.

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

1. We commend CalFIRE on its community engagement practices, and we urge CalFIRE to continue partnering with disadvantaged communities as it has been doing so. We fully support the clear language in the grant guidelines that discuss reducing greenhouse gas emissions and demonstrating co-benefits.¹⁰ We also support 20% of CalFIRE grant funds going toward education and outreach projects.

⁹ Rachel Morello Frosch, Manuel Pastor, Jim Sadd, and Seth Shonkoff, *The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap*. Available at <https://dornsife.usc.edu/pere/climategap/>

¹⁰ The guidelines say: "The project must have a commitment for active participation from one or more of the following: local residents, local business, local nonprofit group or local government." They further state that "The project must show that the community where the project will occur was, and will continue to be, authentically engaged about the project."

2. Effective and meaningful community engagement is critical to the sustainability of Urban Forestry Projects. Funding for program maintenance and operation often gets cut, and forestry projects are unable to continue long-term. For forestry projects to be sustainable, communities must be appropriately involved to make sure proper maintenance and operation of the project occurs. For example, the City of Seattle implemented rain gardens in Ballard neighborhood to help manage stormwater, but failed to properly inform the community about how the rain gardens functioned.¹¹ Communities complained to the city because they did not think the gardens were functioning properly and because they were ruining the neighborhood's appearance. Some community members tried to maintain the rain gardens but their efforts were ineffective because they did not receive training on proper maintenance. If the City had adequately informed the community about the rain gardens (their purpose, how they function, benefits), community members may have been able to help the City care for the rain gardens and ensure project sustainability.
3. We recommend the IAP develop and implement strong tribe engagement policies. The IAP must address how local, regional and state agencies can effectively engage with tribal communities and address the serious risks they face from wildfires.

¹¹ <http://www.myballard.com/2011/05/23/city-taking-action-on-roadside-raingarden-concerns/>; <http://www.seattlepi.com/local/environment/article/Ballard-s-rain-gardens-A-bad-green-experiment-1345766.php>

Climate Justice Working Group
Review of *Safeguarding California* Implementation Action Plans and
Recommendations for 2017 Update of *Safeguarding California*
Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here

Land Use & Community Development Sector

Working Group members who reviewed this IAP

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Other community members and allies consulted in the course of this review

- Vivian Huang, Asian Pacific Environmental Network

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

- Unlike other sector plans, the Land Use IAP is a broad overview and does not have a lot of specifics. This may be a function of the fact that land use is a cross-cutting issue that is addressed in many of the other sector plans (for example, the Public Health IAP includes a robust list of land use-related action items). *Safeguarding California* does not have a specific section on land use to draw from in formulating an implementation plan, which may play a part in the lack of specificity.
- The document provides a good overview of the three main state entities that play key roles in land use and community development issues and highlights a number of high-level plans, such as the EGPR, the General Plan Guidelines, the State Housing Plan, etc., that are relevant to this sector, but it is unclear how these documents, once updated, will address climate adaptation and more specifically address the needs of communities vulnerable to climate change. With respect to housing element review, the plan indicates that work is ongoing to incorporate climate considerations into housing elements, but again there is little information as to the specifics of that work.
- The IAP has some discussion of the opportunity to better align funding programs to support climate adaptation goals. It would be useful to expand on this and have a broader discussion of the array of funding streams that historically have played and currently play a role in influencing land use patterns, such as transportation funding, property and sales taxes, etc., and the challenges in overcoming the negative consequences of past decisions on vulnerable communities and in ensuring that fiscal levers do not continue to reinforce poor land use decision-making. It would also be useful to discuss how the lack of funding available for affordable housing at the state level, as well as the tremendous challenges related to infrastructure financing, impact efforts to build strong, climate resilient communities.

- The plan highlights the fact that land use decisions are primarily made locally and focuses on providing guidance to local governments, collaborating, etc., as a means to enhance climate adaptation efforts in the land use sector. It also highlights that a lack of financial resources can impede local implementation of state policies, plans, and priorities. However, it does not include a discussion of how local control over land use can be a barrier to implementation as well, particularly when it comes to addressing the needs of vulnerable populations. While guidance and support to locals is important, some local governments remain reluctant to implement adaptation policies at all, or implement them in ways that do further harm to vulnerable population. Improving land use decision-making will require a tremendous shift for some local governments that have a history of not working well with low-income communities and communities of color. How to address this is a critical issue.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

- **Preventing and mitigating displacement:** the report mentions displacement in a single sentence. Given the rapidly growing threat of displacement and significant impacts, this discussion should be expanded. The Public Health sector plan provides a strong discussion on “resident empowerment, leadership, and decision-making through training programs, guided reviews of plans, neighborhood scans, mapping activities as part of resident-led planning, which generate buy-in, political mobilization, and relevant ideas to minimize displacement,” (pg. 170 - 171). The Land Use sector plan should draw from the robust discussion in the Public Health plan. A recently published report published by researchers from UC Berkeley and USC notes that “gentrification-induced displacement from climate policy may occur when formerly poor or low-income neighborhoods become attractive to wealthier groups because of the increased access to new low-carbon goods, services, or resources. If climate-related policies drive up the cost of local housing, goods, and services, then rather than being positioned to enjoy these benefits, over time the original residents will be pushed out of the neighborhood. This situation is not only problematic from an equity perspective; it can also backfire on climate goals by forcing out local residents who are actually transit-dependent in favor of those who have higher incomes and are more occasional users.”
- Framing this section with the distinction between climate adaptation versus climate resilience substantiates the importance of considering land use, social cohesion, and community development in climate planning. Climate resilience is a broader, interdisciplinary approach that integrates physical, economic, and social resilience in the context of climate change.
- Supporting strong, equitable implementation of land use planning and community development policies that prioritize environmental justice, including:
 - SB 1000 (Leyva), which requires general plans to include an environmental justice element that identifies objectives and policies to reduce the unique or compounded health risks in disadvantaged communities, to promote civil engagement in the public decision-making process, and prioritize improvements and programs that address the needs of disadvantaged communities. OPR has a unique role in guiding and supporting its implementation. OPR must ensure it provides available resources, clear guidelines, and technical assistance for local government to successfully implement SB 1000.

- AB 2722 (Burke), which establishes the Transformative Climate Communities program to fund programs that advance multiple climate and clean energy efforts in a community-wide approach such as integrating affordable housing near transit, energy efficiency, and clean transportation. AB 2722 supports GHG reduction and community resilience investments in the most disadvantaged communities, devised through a multi-stakeholder, community engagement process.
- AB 2800 (Quirk), which requires state agencies to take into account the current and future impacts of climate change when planning, designing, building, operating, maintaining, and investing in state infrastructure.
- Addressing the affordable housing crisis: California is short roughly 5 million housing units currently, most at the very low- and low-income levels but also at the moderate-income level in high-cost areas. How we begin to fill this gap and also ensure adequate production to address population growth in the future is a challenging question. The state has few financial resources left to fund affordable housing production and preservation and there remain tremendous barriers in many local communities to housing production, leaving lower-income individuals and families increasingly housing unstable and at greater risk to the impacts of climate change.
- Climate Action Plans: Many cities throughout California have adopted Climate Action Plans as a response to confront climate change impacts. The Office of Planning and Research must work with regional and local governments to provide guidance for cities that have adopted such plans and help them quickly achieve such goals but also look further than climate action plans for other more proactive solutions.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

- Highlight policy tools to offset risk of displacement: state and local policies to improve the capacity of neighborhood residents to avoid displacement from gentrification include inclusionary zoning, affordable housing requirements, housing trust funds, and other related tools. The Public Health sector plan highlights anti-displacement policies like ordinances or community benefits agreements that result in affordable housing protection (at a deep level of affordability, for many decades), local hiring, guarantees that current residents get moved first into new housing units, and tax credits to control displacement,” (pg. 171). We suggest drawing from the robust discussion in that plan in building out a recommendation to integrate anti-displacement policies to increase community-level resilience. A promising state-level approach used by the Strategic Growth Council is to make anti-displacement strategies one consideration in administering its allocation of cap-and-trade dollars for the Affordable Housing and Sustainable Communities (AHSC) Program. Specific criteria related to affordable housing that should be meaningfully incorporated into scoring for grant applications include past affordable housing production, future affordable housing production, and current affordable housing preservation (including anti-displacement strategies). As an example of local policy, Measure JJ, which recently passed in Oakland, protects renters from illegal rent increases and unjustified evictions.

- Include key anti-displacement performance indicators in monitoring project outcomes. Factors associated with displacement should be tracked, including renter occupancy, high rent burdens, rent control, availability of subsidized housing, compound burden of housing and transportation costs, and other income burden indicators. In order to protect disadvantaged communities from adverse economic consequences, climate policies and projects should track equity outcomes by answering the following questions:
 - *Does the project increase economic and social resilience to gentrification-induced displacement created by low-carbon urban development?*
 - *Have disadvantaged communities experienced gentrification due to sustainable urban development initiatives? Do sustainable community strategies include anti-displacement measures?*
- Ensure that the various documents highlighted in the IAP, including the Environmental Goals and Policies Report, the General Plan Guidelines, the State Housing Plan, and other state-level planning documents, pay particular attention to gentrification and displacement and include strategies and policies aimed at mitigating and/or preventing the related impacts. These documents should also include robust discussions of environmental justice and equity issues. Additionally, with respect to funding programs, preventing displacement needs to be a factor in scoring applications and making funding decisions. The AHSC program guidelines provide points for the adoption of local anti-displacement measures, which is a good start, but it would be better if preventing displacement was a threshold requirement for this and other funding programs.

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

- Changes in community engagement and planning in EJ communities: Many urban communities are currently experiencing poor land use decisions and poor development that does not address current issues and needs in those areas (i.e. air, land and water pollution, blight, abandoned lots, brownfields, etc.). Residents need the opportunity to effectively and genuinely participate in local efforts in planning and development that accurately address the current needs and future impacts. As a next step, the three State entities highlighted in this IAP as the leads on land use issues must:
 - Conduct vulnerability assessments, prioritizing disadvantaged communities showcasing the current impacts in lack of affordable housing and poor land uses.
 - Plans need to have elements to confront current impacts of past and present poor land use, zoning and planning that allowed for many communities to have industrial facilities, brownfields, superfund sites, and discriminatory land use and development actions and projects.
 - Plans must clearly define roles and timelines.
 - Help identify resources.
 - Provide technical support to augment the local and grassroots capacity.

- Regional focus: as a next step, it would be beneficial to create regional reports to better focus on the differing risks and threats in different parts of the state, how these risks and threats impact vulnerable communities, and how they can be addressed in ways that both engage and benefit disadvantaged populations. This may also eliminate some of the challenges that come from breaking the report into sectors that have so much overlap with one another.
- Community engagement: generally speaking, the state needs to do a better job at engaging vulnerable populations by providing translated materials, scheduling public meetings at times that are workable for residents, offering child care, etc.
- There needs to be analysis/discussion of how climate change is in many cases exacerbating existing inequities and leaving disadvantaged populations even more vulnerable to climate change.
- Best practices: given the complex, cross-cutting nature of land use issues, it would be helpful to highlight best practices and/or provide case studies that highlight successful collaboration with vulnerable communities in addressing climate adaptation from a land use perspective.

Climate Justice Working Group
Review of *Safeguarding California* Implementation Action Plans and
Recommendations for 2017 Update of *Safeguarding California*

Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here

Oceans and Coastal Resources

Working Group members who reviewed this IAP

- Lead | Ernesto, Communities for a Better Environment (CBE)
- Co-reviewers | Lucas, Central Coast Alliance United for A Sustainable Economy (CAUSE)

Other community members and allies consulted in the course of this review

- Marce Gutiérrez-Graudigš, Azul

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

- **Vulnerability Assessments**
 - Actions by the BCDC to evaluate vulnerable communities in Contra Costa and Alameda county are helpful, but more effort should be made to include input from residents. Although much of the implementation lies within cities, counties, and agencies, there is a missing component of engagement of residents living in these vulnerable communities.
 - In performing an analysis of vulnerable communities, there should be workshops/community events for awareness and community action. Communities in areas of higher risk of sea-level rise and coastal flooding must be advised of the potential risk to make necessary preparations. In EJ communities, moving out of a current residence can be difficult due to various socioeconomic factors.
 - Allocation of grant funding for disadvantaged coastal communities must include outreach and engagement to residents living these communities.
- **Public Trust Doctrine:**
 - California should prioritize public coastal access, because it provides no-cost recreational opportunities and access to natural resources for disadvantaged communities in coastal regions who cannot afford beachfront property. However, as the coastline moves inland, the boundaries between public coastal land and private property will need to move inland as well. California should not prioritize the preservation of private coastal property over public coastal recreational access.
- **In Granting Coastal development permits, the following considerations should be made:**
 - CCC should avoid coastal protection measures such as seawalls that protect beachfront homes behind them at the expense of diminishing public recreational areas in front of them.

- **Research and Management practices must include outreach and community education for public recreational areas**
 - Findings of potentially hazardous conditions for recreation or fishing should be made available to the community in a way that respects culture and diversity.
- **Adaptation Co-benefits**
 - Since many energy facilities such as refineries and power plants are in coastal communities, the California Air Resources board should consider the proximity of these stationary sources of pollution to disadvantaged communities when assessing adaptation co-benefits. Major transportation hubs like airports and ports must also be considered.
 - In the development of criteria for defined adaptation co-benefits, environmental justice communities must be a part of developing this criterion. Cumulative impacts from pollution and climate change impacts like sea level rise and extreme heat events could have deadly impacts on our communities. By engaging environmental justice communities, CARB will be able to create a criterion that will truly benefit our at-risk communities through adaptation co-benefits.
 - Example: Coastal residents living in communities with constant exposure to pollution from varying surrounded sources are sensitive to extreme events. The extra sensitivity of being acclimatized to cooler weather and the result respiratory illnesses from exposure to cumulative impacts can result in deadly extreme heat events.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

- **Cleanup sites in coastal locations must be addressed quickly to prevent higher future costs**
 - Cleanup sites such as EPA Superfund sites often have long timelines for removal and remediation, and have been capped or had other temporary measures taken to prevent spreading of contamination. However, coastal flooding events present higher risks of spreading contamination from cleanup sites, endangering nearby communities and creating much higher cleanup costs. Coastal sites need accelerated timelines for cleanup to prevent higher economic and human costs in the future.
- **Improve flood resilience by limiting and reducing coastal industrial infrastructure**
 - Industrial areas are often located along coasts and rivers because of the former needs of obsolete technology, yet because these areas continue to be zoned industrial, they are the default sites for new industrial facilities like power plants. With flooding risks from increasingly frequent extreme storm events, siting transportation and energy infrastructure along coasts and rivers increases communities' vulnerabilities to natural disasters by creating potential shutoffs of critical services in emergencies. Municipalities need to update their Coastal Plans with sea level rise projections and will often need assistance from the state to discourage new industrial development on the coast and remove industrial infrastructure from the coast.
 - Transportation facilities like ports, airports, rail lines, and piers must also make efforts to harden their infrastructure as to not harm nearby communities.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

- **Major ongoing coastal resilience planning must include environmental justice communities**
 - As state and local agencies plan for coastal climate resilience, low-income communities of color rarely have a seat at the table, yet will be most negatively impacted. Planners need to do more to engage environmental justice communities, including convening and dedicating resources to tables of people of color-led community groups to play a major role in developing coastal resilience plans.

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

- **Outreach and education to vulnerable communities**
 - Outreach must be performed in a manner that considers the culture and diversity of vulnerable coastal communities
- **Special considerations should be made for publicly attended meetings (i.e. Coastal Commission hearings)**
 - Provide interpreters, or interpreting services
 - Offer variety of public commenting periods for there to be opportunities for comments in the afternoon
 - Alternate locations should be considered so that hearings and meetings can be held closer to communities of color, centric city locations with adequate public transportation
- **Defining Vulnerable coastal communities**
 - Low-income residents living in areas that face sea-level rise and coastal flooding require incentives and programs to help implement cost-effective green infrastructure to reduce flood risk.
 - Low-income residents living in residential areas bordering industrial land uses require these types of infrastructure to protect property and livelihood from hazardous and toxic releases transported through flooding.
 - Race, Income, and linguistic isolation are important to consider when evaluating vulnerable communities. Considerations for vulnerable communities must be made across all sectors for coastal planning.
 - Major Energy facilities such as power plants, refineries, toxic facilities, and oil drilling sites should be taken into consideration when assessing potential impact of sea level rise on these facilities. Energy facilities must assess the impact of system failures and transference of toxic and hazardous releases could have on surrounding communities.
 - Findings of potential impacts of sea-level rise or coastal flooding of local energy facilities should be made available to the public.
- **New or Expanding Energy Facilities in Coastal communities**
 - Proposals for new or expanding energy facilities must take into account impacts of sea-level rise and potentially infeasible mitigation of impacts on the surrounding community.

**Climate Justice Working Group
Review of *Safeguarding California* Implementation Action Plans and
Recommendations for 2017 Update of *Safeguarding California***

Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here

Public Health

Working Group members who reviewed this IAP

- Martha Dina Arguello, Physicians for Social Responsibility Los Angeles
- Caroline Farrell, Center on Race, Poverty & the Environment
- Sarah de Guia, CPEHN
- Ameer Raval, APEN

Please list all who participated.

Other community members and allies consulted in the course of this review

- Pete White LA Community Action Network

Please list all who participated and asked/agreed to be named.

Part 1: Review of individual sector IAP

For each set of questions, please note where there is consensus and where there are differing views.

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

Positives:

- 1. Good overview on equity and vulnerability:** The context and definitions were good. For improved readability consider using bullets and text boxes. Also, provide data on demographics to illustrate importance of equity (increasing aging pop, increasing chronic disease among certain racial/ethnic groups); might also have examples of how vulnerabilities play out such as heat waves in 2006 in LA. Also move the vulnerability measures towards the beginning to illustrate needs/concerns. Good overall definition of social vulnerability and the nexus between climate and health
- 2. Health in all policies** is a good frame work and should be introduced earlier - including the work at the local levels.
- 3. Key Initiatives:** All of the key initiatives are good. To enhance the data, include the goal, expected outcome or impact, and if it addresses equity, vulnerable populations, or another key aspect of the work. This way folks can easily flag particular projects they are looking for.
- 4. Comprehensive Vulnerability Assessment:** Demonstrates a comprehensive and interdisciplinary approach to prioritizing vulnerable populations and strengthening

public health vulnerability assessment tools. Considers socioeconomic vulnerability factors, access to adaptive resources and services, and living conditions. Identifies climate hazards can have cumulative health impacts. Includes non-climate factors like aging population and chronic disease prevalence.

Deltas:

- 1. Concerns (pg. 150-151):** It is helpful to raise particular concerns and vulnerabilities, it might be good to organize the section so that you can highlight the particular vulnerability such as age, heat, poverty, chronic illness.
- 2. Pesticides and Ecological Pest Control:** need to consider pesticide impacts from changes in pest management practices due to climate change. We recommend collaborating with the health department to develop more intensive vector control program. The department should provide training and technical assistance in ecological pest control. Ecological pest management practices reduce the need for use of highly toxic pesticides especially aerial spraying of pesticides. It would be helpful to examine what other cities have done with vector control like San Francisco and their use of sterile insects
- 3. Clarify collaboration:** What type of coordination is the state looking for with the Healthy Communities initiatives, First Five or others?
- 4. Regional Focus:** While it mentions rural areas, it seems to focus on rural Northern California, and does not really discussion impacts in the San Joaquin Valley or Imperial Valleys that may be distinct- including drought, water quantity and quality issues, extreme heat etc. There was a recent report that there has been a spike in Valley Fever in Kern County due to the drought and El Nino. There needs to be more awareness within the health field on this issue- particularly because people of color have greater susceptibility.
- 5. Homeless populations:** There is no mention of the special vulnerability of homeless populations both for heat stress, and during extreme weather events
- 6. Increased interagency collaboration:** A more integrated approach can help with the lack of interagency collaboration

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

General Themes:

- 1. Move beyond info sharing to community and government collaborations:** Information sharing and public education only go so far. I would like to see the document overall go farther in advocating for more cross sector/ community and government collaborations as well as partnerships with community based organizations to help with training, outreach, and planning. I would include a fourth bullet point for key priorities to be: Community engagement and collaboration.
- 2. Project scale:** It is not clear whether the scale of the projects are meeting the actual need in communities to build resiliency. It would be helpful to first clarify and then discuss how successful projects can be scaled up to fulfill the existing need.
- 3. Challenges of working with local governments:** Many of the programs depend on working with local governments that have a history of not working with low income communities and communities of color. This can create barriers to deploying strategies
- 4. Public health benefits of green building/solar:** Need more discussion on what these benefits look like

5. **Setbacks:** There is some brief discussion of setback related to freeways (p 162), but are there other setback policies that could be suggested or that are needed to prevent pollution exposure.
6. **Organize Actions to Follow the Framework of the Document:** The actions are good but they should follow based on the framework of the key priorities or areas of need. It would also be good if they were organized based on Short, Mid, and Long term goals. As written some are very broad and long term - so it would be important to note that.
7. **Collaborations and Best Practices:** A key issue missing from this chapter are either best practices or cross sector/cross community collaborations that demonstrate the connection between public health and climate justice. This is also a great way to build relationships with community organizations and get them more involved in the process by highlighting their work at the local level. There are many organizations who have worked at the state or local level to implement programs and services or who are working with their other local community residents to implement climate justice strategies. Moving forward, the state should work more closely with ongoing consumer/EJ/public health groups to provide feedback and input in the process and identify those best practices that could be included in the document.
8. **Climate Adaptation versus Resilience:** In the framing at the beginning, the distinction between climate adaptation and climate resilience could emphasize that resilience includes thinking about both physical infrastructure and social resilience to reiterate that public health, local community networks, and social capital are key priorities to protect and cultivate in EJ communities when we talk about climate change impacts.
9. **Occupational Health and Safety:** There is a brief note on working populations here, but the occupational health and safety considerations and programs specific to outdoor workers could be elaborated. In addition to occupational heat risks to farmworkers, workers vulnerable to heat stress include construction, landscaping, oil and gas extraction, many of whom may also be immigrant workers for whom targeted outreach that is both accessible and empowering is crucial to protecting them from health risks posed by climate change.
10. **Industrial Sources:** There are public health impacts of climate resilience policies regarding industrial sources that already exist. Are there program or rulemaking to require upgrades of sources to prevent future harm?

Section Specific Findings:

Current Actions Section

- Criteria to select initiatives highlighted **does not** include: "How does the initiative address health inequalities and prioritize vulnerable communities?"
- Health care infrastructure resilience to climate impact to provide care during extreme events – **need specific attention on building capacity of health clinics and services** that primarily serve low-income and disadvantaged communities
- Local public health planning tools like warning systems and health surveillance
- Ensure that warning tools are **multi-lingual and accessible to diverse communities**
- **Integrate local data** from disadvantaged and rural communities where rates of health outcomes may be underreported. For example, emergency visit data may not accurately capture rural areas underserved by emergency departments for treatment or areas where populations rely on primary care for health management.
- Highlight **more local examples and case studies** of resilience projects such as the *Blue Lake Rancheria Tribe* (pg. 153)

- **Local Sea Level Rise Planning, Transportation and Health Impacts, Urban Heat Island, Green Building** sections lack specific discussion on public, health, equity, or EJ perspectives
- **Urban Heat Island**
 - For improving thermal comfort of pedestrians during the afternoon in unshaded locations, adding street trees has been demonstrated to be the most effective strategy as a heat mitigation strategies.
- **Green and Energy Efficient Building.**
 - In addition to WAP and LIHEAP (pg. 156), CSD also offer **the Low-Income Weatherization Program (LIWP)** which provides free solar and weatherization services for homeowners and renters who live within a qualified disadvantaged census tract.
 - Under Residential Energy Efficiency and Energy Assistance, the **SB 350 Draft Low-Income Barriers Study Recommendations** in publication by the California Energy Commission includes a recommendation that “energy retrofit programs should have access to funds that allow for addressing non-energy work, such as asbestos, lead, and mold removal and structural maintenance.”
 - We recommend adding a **healthy homes model** to the retrofit program that can also be used with rental units given the challenge of bringing energy efficiency to rental units.
- **Better Understanding of Climate Impacts on Public Health.**
 - There is a growing body of literature on the health risks of **wildfire smoke** that isn’t really cited. One recent study reports an increase in asthma symptoms linked to wildfire smoke, with women more susceptible.
 - More focus on the mental health impacts from extreme weather events
- **Information Sharing and Education**
 - Emphasize developing culturally and linguistically relevant educational materials for diverse population
- **Include more recent policies** of climate and health equity in planning and infrastructure decisions. These include:
 - **SB 1000** (Leyva) requires general plan to include an environmental justice element that identifies objectives and policies to reduce the unique or compounded health risks in disadvantaged communities, to promote civil engagement in the public decision-making process, and prioritize improvements and programs that address the needs of disadvantaged communities.
 - **AB 2722** (Burke) establishes the Transformative Climate Communities program to fund programs that advance multiple climate and clean energy efforts in a community-wide approach such as integrating affordable housing near transit, energy efficiency, and clean transportation. AB 2722 supports GHG reduction and community resilience investments in the most disadvantaged communities, devised through a multi-stakeholder, community engagement process.
 - **AB 2800** (Quirk) requires state agencies to take into account the current and future impacts of climate change when planning, designing, building, operating, maintaining, and investing in state infrastructure.
 - Climate mitigation projects enabled by the Greenhouse Gas Reduction Fund [as established by **SB 535** (de Leon) and **AB 1550** (Garcia) are located in disadvantaged and low-income communities and yield public health and climate resilience co-benefits through local investments in energy efficiency and clean energy access, transit-oriented affordable housing development, and urban greening.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

- 1. Tool trackers:** There are lots of great tool trackers but it is unclear how the tools interact or if there is training on how to use them or who the best audience is for them. The state should consider one database that links the various tool trackers together so that communities have one place to go to search for their issue.
- 2. State agencies and departments:** A visual depiction of the state agencies and departments and their jx in one place might be more helpful in an appendix rather than in the chapter, which is not very useful just listed out. A searchable database for state agencies by issue/topic could also be really helpful for community based organizations and other state/local government staff to identify which agency is working on which issue.
- 3. Health Data:** How can we use maps depicting regional vulnerability to local and regional public health and climate planning efforts?
- 4. Evaluation metrics:** Very much related to the completion of climate action plans or number of roofs installed, building retrofitted, forests sustainably managed, it would be useful to have some public health outcomes attached to those measures including reduction in asthma cases, improved air quality, improved water quality, and other indices that are more tied to health outcomes in low income communities and communities of color. Improvement based on CalEnviroScreen's social vulnerability variables could be a suggestion.
- 5. Transportation:** ARB is conducting a formal study to develop methodologies to measure co-benefits for California Climate Investments for social (including health), economic, and environmental benefits. Once released, this analysis could be useful.
- 6. Land Use:** Mandate that state-administered climate resilience projects include guidelines to avoid substantial harms, such as physical or economic **displacement** of low-income and disadvantaged community residents and businesses or increased exposure to toxic or other health risks. The discussion of anti-displacement strategies on pg. 170 could really be its own section, as climate resilience initiatives like urban greening and energy efficiency measures are proving to have unintended consequences by increasing housing prices.
- 7. Healthy Energy Efficient Buildings and Siting:** Standardize metrics and reporting of health, social, and economic co-benefits delivered by energy efficiency and building standards to support greater investments. The Green and Healthy Homes Initiative cites research on co-benefits of energy efficiency. Prioritize addressing barriers and implementing recommendations identified by the *SB 350 Study on Barriers to Renewables and Energy Efficiency in Low-Income and Disadvantaged Communities* (for release by CEC January 1st, 2017).

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

- 1. Cross cutting goals and recommendations:** We appreciate that the documents opens with these recommendations and goals, it might be good to revisit them toward the end and throughout the plans to show how they are working together.

2. Improving community engagement:

a. Identifying resources to assist with community outreach and education.

Most community organizations or community residents are taxed for time and resources to participate in meetings or input sessions. In order to have meaningful community engagement, we need to identify resources to develop long term or mid term partnerships with organizations who work with local groups or with community members to help 1) conduct outreach and education and 2) ask for input into a planning or development process and 3) come back around with the recommendations/input taken for discussion. Too often planning processes just ask for community input but do not provide education or training on what the document is and how it is used at the state level; therefore, community members may not be equipped to provide the “right” or “useful” information to a state or local government. Better relationships should be developed first and then ask for input. Lastly, we must do better about coming back to community to share how their input was included or not and the rationale. This is a longer term process that takes partnerships and planning.

b. More than just education: It would also be really important for partnerships to be created to help with the public education efforts and to ensure they are available in other languages. It would be important to bring in EJ or consumer partners to help develop and review materials for communities to ensure they are going to hit the target. Providing resources for community organizations to continue their work with EJ communities can support long-term public health and climate action planning and partnerships.

c. Community Engagement and Capacity Building section (pg. 164): this section addresses many of the overarching EJ goals for all sectors i.e. strengthening social capital, community organizing, civic participation, and integration into decision-making. I would like to see this entire section be moved and reworked in way that frames these as guiding principles for overall program planning and implementation.

d. Climate Champions and Empowerment: I thought it was an innovative idea to recruit physicians and health providers to be designated as “Climate Change Champions” (pg. 160) - could we extend this model to train and engage community advocates to become local climate change champions? Moreover, I would like to see more emphasis on building local empowerment and ownership in climate resilience decision-making processes.

3. Regional Specificity: In terms of structure, it might be better if there was a regional discussion in addition to the overall statewide strategy. Each region of the state faces different challenges given the different environmental, economic and social factors it faces. It would be good to drill down a bit more and have a regionally specific discussion that could describe how these strategies could be deployed cumulatively to have a more holistic impact on public health. It might also lend itself to a more focused discussion on barriers or challenges specific to the region and how the state might help groups overcome those challenges.

**Climate Justice Working Group
Review of *Safeguarding California* Implementation Action Plans and
Recommendations for 2017 Update of *Safeguarding California***

Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here

Transportation

Working Group members who reviewed this IAP

- Lead:
 - Sona Mohnot, Greenlining Institute
 - Alvaro Sanchez, Greenlining Institute
- Co-reviewers:
 - Veronica Garibay, Leadership Council for Justice and Accountability
 - Ernesto Arevalo, Communities for a Better Environment
 - Sarah de Guia, California Pan-Ethnic Health Network
 - Erika Rincon Whitcomb, Policy Link

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

1. Include Community Vulnerability in CalTrans Vulnerability Assessment

The CalTrans Vulnerability Assessment will be used to inform new transportation policies. The assessments must discuss threats to low income communities and communities of color. These communities have limited transportation options and rely heavily on public transit, especially during extreme weather events. As the state prepares the Transportation Sector for climate change, it must discuss how low income communities of color will be impacted by new transportation policies.

We urge the IAP to incorporate community vulnerability, specifically for low-income communities, into the CalTrans Vulnerability Assessments. Including community vulnerability will help make sure that agencies, as they develop and implement important plans and policies, commit to improving mobility and safety needs for low income communities and address threats that result from transportation policies, such as displacement, inadequate access to critical resources and opportunities, and disproportionate air pollution impacts.

Although the IAP notes that mobility needs in low income communities is a measurement of mobility, it must elaborate on how this measurement will be included in the assessment. Other measurements must also be included to better understand community vulnerability, such as population increases, threat of displacement, affordability of transportation, and transportation demand and usage (identifying low-income communities that have low car ownership and are underserved by public and active transportation that connects them to critical services and amenities). We strongly recommend using CalEnviroScreen socioeconomic indicators as additional measurements.

Finally, the IAP should have mechanisms in place to ensure that local and regional transportation agencies are involved in the vulnerability assessment analysis. Low income communities and communities of color have faced historic patterns of neglect, disinvestment, and inequity from our state's transportation system and continue to disproportionately bear the burden of negative health, climate, and socioeconomic impacts that result from state and local transportation policies. Based on the vulnerability assessment, local and regional agencies should be directed to align their policies and investments to address needs of vulnerable populations. This would create a much needed shift to ensure that our transportation investments maximize safety, health, climate adaptability, and mobility outcomes in our communities with the greatest unmet needs.

2. Elaboration on Pre-Disaster Emergency Plans and Development of Long-term, Post-Disaster Plans

We are pleased the IAP includes pre-disaster emergency planning efforts in low income communities of color. We offer the following recommendations to strengthen two pre-disaster initiatives identified by the IAP:

- **The development of equitable evacuation routes** (p. 185) – We recommend the IAP elaborate on this initiative by identifying specific ways that new, clean transportation options and infrastructure can be equitably implemented in vulnerable communities across the state. The IAP must further identify who is responsible for this initiative.
- **Enhanced emergency preparedness during climate events for all transportation modes, particularly for DACs who are less likely to own cars** (p. 186) – We recommend the IAP expand on this initiative by discussing how to prioritize mobility needs for low income communities of color with limited transportation options, especially for children, the elderly, people with chronic conditions, and people with limited English proficiency. The IAP must develop a strong communication system in vulnerable communities to disperse information and warnings about weather events.

In addition to expanding on pre-disaster efforts, the IAP must address long-term, post-disaster needs of vulnerable communities. For example, once communities have evacuated, where will they go? The IAP must plan ahead to ensure evacuation shelters exist and basic necessities like food and water are available. Moreover, the IAP must aim to ensure that vulnerable communities thrive upon returning home. This means increasing resiliency measures *now* (cool roofing, deployment of micro-grid technology and community solar) so that communities will prosper *after* they return. Without such foresight, many vulnerable communities may be displaced and forced to start new lives. The IAP should explore how FEMA can support long-term resiliency strategies for California, and see how state law can fill in any gaps.

3. State's transportation budget needs to shift to investing more in public transportation and transit operations for both urban and rural low-income communities

We support the funding that is going to transportation investments in disadvantaged communities like the Low Carbon Transit Operations Program (LCTOP) and Active Transportation Program (ATP) (p. 182). However, the ATP is dwarfed by the billions of dollars dedicated to building, expanding, and maintaining roads and highways and the LCTOP is sourced through California Climate Investments. Thus, the vast majority of the annual several billion-dollar transportation budget remains unchanged and continues the business as usual status quo. A larger proportion of transportation investments must be

directed to transit operations, and walking and biking infrastructure in low income communities. If CalTrans and local transportation agencies continue to invest as they currently do, the system will not be strongly aligned with reducing GHGs and promoting climate adaptability and transportation access in low income communities. We strongly recommend the IAP think beyond GGRF and ATP for funding sources, and direct other large state transportation funding sources to address equity and impacts of climate change (State Transportation Improvement Program (STIP), State Highway Operations and Performance Program (SHOPP), LTF, and Local Roads). Further, the state should be increasing investments in transit operations in low-income communities through the state transit assistance fund.

Additionally, we recommend the California Transportation Commission include seats dedicated to equity and environmental justice, as well as sustainable transportation and climate change. CalTrans must also ensure that staff from the Natural Resources Agency and ARB provide counsel to them as they develop transportation plans and policies.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

1. Transportation “Hot Spot” Maps Must Include Low-Income Communities

The IAP discusses development of a “hot spot” map that will look at demographics and other factors to determine which communities are most vulnerable to climate change. Since climate change disproportionately impacts low-income communities and communities of color, these communities must be included in the analysis and weighted significantly higher in terms of vulnerability. The map must also consider the threat of displacement for low income communities resulting from transportation policies .

Additional Points Relating to “Hot Spot” Maps:

- The IAP says the “hot spot” map will include “climate impacts” in the analysis. We recommend the IAP state which specific climate impacts it will examine. Air quality metrics must be included in the analysis.
- CalTrans should consider utilizing the hot spot map in the Vulnerability Assessment because it can provide important information on community vulnerability and inform the agency of equity and environmental justice concerns as it develops transportation plans
- The IAP needs to explain the purpose of the map, and how agencies will incorporate data from the “hot spot” map into plans, policies, and funding allocations. For example, will the data be used to inform (1) what transportation projects are awarded funding and (2) technical assistance to regional transportation agencies and local jurisdictions to better address climate change in planning efforts?
- The map must be updated regularly (every year) to ensure climate change policies are based on the most up to date demographic information

2. Long-term Planning Documents Must Incorporate Equity and Environmental Justice

We recommend the IAP identify and implement equity-leading strategies to support transportation agencies as they plan for climate change impacts in the state’s infrastructure plan, Caltrans Strategic Management Plan, and Regional Transportation Plans/Sustainable Community Strategies (RTP/SCS). The Plans must consider impacts of gentrification and urbanization on vulnerable communities to assist agencies as they engage in transportation planning, funding and implementation. We also urge that the California Transportation Plan

be enforceable to make sure agencies are accountable for carrying out the CTP's equity and climate directives.

Additionally, the Plans must prioritize removing barriers for vulnerable communities to access clean transportation options. For example, the state should develop and implement an electric vehicle pilot program in designated low income communities, and showcase how the model can be replicated in other vulnerable communities. The state can designate Wilmington, Richmond, City of Huntington Park, City of South Gate or places in the San Joaquin Valley as an "EV Zone", and create a 5-year strategic plan with specific targets to improve access to different clean mobility options, such as:

- Creating a multi-agency task-force with funding, resources and mandate to implement the plan and reach the targets
- Creating widespread access to charging stations at homes, businesses and public spaces in the pilot area
- Allocating resources for the EV Zone through targeted outreach and cooperation with elected offices and community-based organizations
- Close the public transit gap, increase frequency of bus services, and close the first mile/last mile gap
- Creating an effective biking and bike-sharing program in the pilot area
- Creating an effective EV car share program in the pilot area
- Working with the City planning staff to update the general plan or create specific plans to prioritize active mobility options
- Creating additional incentives for people living in the EV Zone to take advantage of the wide range of ZEV mobility options
- Working with CBOs and academic partners to show how this "Leap-Frog" and transformative approach can be replicated in other vulnerable communities and inform policy moving forward

3. Comments on Makeup and Focus of Cross-Departmental Transportation Sector Adaptation Team

- The task force must have strong leadership, support staff and meaningful stakeholder engagement.
- The interagency task force should include a member specifically assigned to the issues of environmental equity and environmental justice. The task force should also include representatives from communities to make sure their needs are being heard and addressed.
- We recommend that Metropolitan Planning Organization (MPO) and Regional Transportation Planning Agency (RTPA) participate in the task force
- The task force should focus on transportation access for low-income residents living in disadvantaged communities. The work plan should include the following:
 - **Funding:** require a focus on impacts of air quality and transportation access for non-motorized users living in low-income communities.
 - **Project Design:** the focus should be on public transit and active transportation access to community-identified resources and amenities for low-income communities; as well as community planning and engagement in low-income communities.
 - **Contracting:** should promote stronger disadvantaged business enterprise preferences.
 - **Project Delivery:** should focus on recruiting, targeting, training, and hiring low-income residents facing barriers to employment.

4. Include Equity Metrics

The IAP needs to include equity metrics to measure whether or not transportation programs and projects are providing meaningful benefits for low income communities. We recommend the IAP include the following metrics:

- Project should include descriptions of mobility, public health, safety and climate benefits to low income residents
- Levels of particulate matter in air prior to completion of a project and estimated levels upon completion of projects
- Analysis of air pollution burden on residents within project area
- Track development of infrastructure to support walking and biking in low income communities

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

1. Safeguarding California Must Prepare for Unintended Adverse Consequences and Include Adaptive Management Strategies

Every sector plan must incorporate strategies that prepare for unintended negative consequences, such as displacement, that may occur when vulnerable communities are forced to relocate during extreme weather events. A model to follow is the Scoping Plan that ARB is required to prepare under AB 32 to explain California's approach to climate mitigation. The Plan requires ARB to evaluate the environmental and public health impacts of the Scoping Plan. *Safeguarding California* needs to include a similar mechanism that assesses impacts resulting from climate adaptation policies. Mechanisms such as adaptive management strategies can help address unintended negative impacts and allow for flexible changes in the future.

In the transportation sector plan, local, regional and state agencies should be required to conduct an adverse impacts assessment prior to funding construction or repair of transportation infrastructure in low income communities of color. Adverse impacts can include: displacement resulting from gentrification, increased housing and living costs, and increased air pollution. Agencies should not fund projects that may result in extreme harm to vulnerable communities; they must find ways to reduce harm such as by including adaptive management strategies. The adverse impacts review process should be integrated into the infrastructure planning process, and not be separate from the main process. The following projects must incorporate an adverse impacts analysis:

- **HSRA New Rail System** – We urge agencies to assess how the system may adversely affect low income communities, and to find ways to support adaptive management strategies that focus on equity priorities, such as anti-displacement measures. The IAP should also address how the state will work with regional transportation agencies to ensure transit services (bus, car share, bike, walk) are in place to support high speed rail. The transit services must be available to low income communities at affordable rates to ensure equity in transportation systems.
- **Zero Emissions Freight System** – Similar to comments for HSR, the IAP must determine how the new Freight System will affect vulnerable communities, and include adaptive management strategies that allow for flexibility when issues arise in the future.

2. IAP Must Identify Potential Economic Co-Benefits Resulting from Transportation Plans

We find that *Safeguarding California* is an opportunity for the state to not only prepare communities for climate change, but also reduce racial disparities in income inequality,

wealth, unemployment, and poverty, by targeting economic benefits in low income communities of color. All IAPs must leverage public funds to target economic opportunities into vulnerable communities. In this IAP, transportation infrastructure development and emergency preparedness will create jobs, training and contracting opportunities for businesses. The state should prioritize bringing these opportunities into low income communities.

When discussing economic advancement, the IAP must also commit to providing affordable housing options in low income communities that are in close proximity to public transit options. For example, the IAP's discussion on the HSR should not be limited to how the system will reduce GHG reductions, but should also address how the HSR can provide jobs and affordable housing for low income communities.

3. Financing Opportunities

As the state moves forward with ambitious goals to combat impacts of climate change, it must recognize that regional agencies may not have adequate expertise to address impacts. The state must play a more proactive role in providing support, guidance and best practices to agencies. Local, regional and state transportation agencies must convene to assess and recommend changes to current and future transportation funding sources and determine (1) how they align with state climate adaptation goals and (2) how they prioritize the needs of vulnerable communities.

Additionally, the state needs to identify funding opportunities from private and public sources to make meaningful climate adaptation investments. Projects funded by the GGRF can have adaptation co-benefits for vulnerable communities. *Safeguarding California* should look for ways to fund climate adaptation projects with the GGRF. Sectors should implement actions that can reduce GHG emissions and also make vulnerable communities more resilient.

As the state identifies funding sources for climate adaptation, it must take into account the extra resources vulnerable communities may need, such as outreach in multiple languages and technical assistance needs.

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

1. State needs to provide more direction to agencies about how to increase engagement with and education to vulnerable populations on the importance of climate adaptation. State must provide in-language, culturally sensitive, relevant messaging to reach vulnerable communities
2. Transportation planning should incorporate both climate and equity impacts, and low-income residents should be informing transportation planning and project design. Local planning processes must make sure representative from vulnerable communities have a seat at the table when developing adaptation strategies. Affected communities must be at the center of decision making and transportation projects must address community identified safety and mobility priorities.
3. State should make more of a robust outreach effort to engage community members in the overall development of transportation planning. State should partner directly with local community based organizations to ensure meaningful input. Information

sharing should include listening sessions with CBOs and residents in low-income communities.

4. State needs to set aside budget for community engagement and outreach efforts. The state should provide funding and support to CBOs to help them reach out to their communities with information about climate resiliency.

**Climate Justice Working Group
Review of *Safeguarding California* Implementation Action Plans and
Recommendations for 2017 Update of *Safeguarding California***

Sector Plan Analysis and Recommendations

Sector implementation action plan (IAP) reviewed here

Water

Working Group members who reviewed this IAP

Janaki Jaganath CAFA

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Other community members and allies consulted in the course of this review

Part 1: Review of individual sector IAP

What issues and programs included in this IAP address the needs of communities most vulnerable to climate change? What are the principal challenges to implementation of such issues and programs?

While all priority strategies for reducing climate risks included in the plan could potentially address needs of most vulnerable communities, they do not explicitly address impacts and opportunities in vulnerable neighborhoods and communities. Principle challenges to implementing strong strategies include understanding California's diverse water systems and how vulnerable communities interact with the various agencies- from the very local to state level - responsible for oversight and regulation of waterways and water systems. The strategies most like to address the needs include sustainable groundwater management, increase water efficiency, preparing for hotter and drier conditions, addressing water related impacts of climate change in vulnerable communities, water and land use coordination and better understanding the risks of climate change.

Principal challenges to implementation:

1. Community Engagement. The strategies outlined in the plan discuss various tool and plans developed by or soon to be developed by state agencies but they do not discuss how and when communities most impacted are engaged.
2. Water Quality Vs Water Quantity. Most of the focus is on quantify and availability of water, which is important but little attention is paid to climate change impacts on the quality of drinking water. To meaningfully address complex impacts on water resources, we must expand the scope to addressing water quality needs.
3. Integrating land use and water planning. These two issues have primarily been bifurcated at the local level with minimal attention to truly understanding the impact of such action on creating, healthy and sustainable communities. While there is much

discussion on urban land use and water planning nexus, there is little mention of agricultural land use policy and its impact on water. Communication and coordination between and among water providers, local agencies with land use authority, GSAs, MPOs (given the roles of SCSs) will be particularly challenging as these entities have traditionally operated in silos.

4. Increasing access to water efficiencies will prove particularly difficult for families in vulnerable communities when funding is not sufficient and knowledge/outreach of key programs is not widespread.

What issues and programs are missing from this IAP? What are the principal challenges to implementation of missing issues and programs?

1. Building capacity of rural, disadvantaged communities. Even if the state develops great tools and plans, there needs to be sufficient technical, managerial and financial capacity within disadvantaged communities to implement or utilize them. Regional plans (i.e. IRWMPs) similarly require local capacity to implement.
2. Democratizing water management. The sector references various efforts as part of each strategy to currently underway to assess impacts and identify solution yet fails to discuss how communities – communities already facing source and contamination vulnerability – will play a role. The plan also fails to mention how state agencies will interact with and engage organizations working directly with vulnerable communities. These communities still lack access to democratic participation in water planning due to irrigation district structuring: some are stuck on contaminated ground water (such as Kettleman City), some are stuck on expensive surface water (such as Cantua Creek/El Porvenir). These communities need ability to participate in planning for their own long-term water access and climate resilience as groundwater resources become less and less reliable.
3. Addressing the needs of tribal communities. There is no discussion about tribal communities and how they could integrate into IRWMP and SWRCB planning. The state has historically made it really difficult for tribes to participate in and benefit from the state's water program.
4. Incorporate private well communities in all planning efforts. Californians relying on domestic wells are particularly vulnerable to impacts of climate change. Data is limited (if not, nonexistent), water quality testing is not required and little to no financial assistance is available to support new wells that have gone dry.
5. Contamination of protect aquifers by the oil and gas industry. Since 2014 we have seen some of the most egregious cases of irreversible contamination of California's protected aquifers. Aquifers that are vulnerable to being used as injection sites for oil and gas production, as well as those that are vulnerable to the impacts of fracking, need to be under close monitoring and enforcement. The SWRCB needs to implement a more effective method of interfering in contamination of protected aquifers by the oil and gas industry.
6. Disadvantaged communities and private well communities must be included in SGMA implementation. The IAP discuss the role of local agencies and DWR in implementing groundwater management efforts it does not discuss the importance of community engagement to ensure equity and affordability in water management efforts.
7. Economic impact of source and quality vulnerability in vulnerable communities. Reduced snow pack levels, changes in precipitation patterns and extreme drought will inevitably impact vulnerable communities the most. The race to the bottom is

well underway in the SJV with farmers drilling at alarming rates with little regard of impacts to disadvantaged communities.

What further actionable recommendations and program areas should be incorporated into future adaptation work in this sector?

1. California must implement a lifeline water rate for all Californians. This IAP can take from AB 401 implementation and incorporate those recommendations. Families across the state are already paying more than 10% of their income for safe drinking water and that cost will come at higher cost in order to treat, access surface water and build watery systems that will be resilient to impacts of climate change.
2. The longer residents of DACs are drinking unsafe water, the greater the public health risks and impacts. Planning and evaluation are important, but if we don't begin to implement solutions, people will continue to be exposed to ever-increasing risks. All state agencies must coordinate their programs to ensure that safe drinking water and a reliable sources of water are adequately integrated.
3. Prevent continued degradation of groundwater. Contamination of our aquifers is not a legacy issue. It occurs on a daily basis. The state must require and enforce industry-side regulation of the most harmful water quality offenders in and around vulnerable communities: agricultural sources of nitrate (irrigate agriculture, dairies, feedlots), pesticides, fertilizers, fumigants and salts.
4. Sustainable funding sources. The state must go beyond current funding sources to ensure the human right to water.
5. Provide technical assistance to local agencies on best practices. Local agencies need a significant amount of support to adequately and sustainably integrate water and land use planning. Each local agency plays a key role in growth and water management. Cities, Counties, LAFCOs, MPOs, GSAs and special districts must work together to seamlessly incorporate water needs in their planning efforts.
6. Specifically, around surface water projects, DWR and SWRCB need to work together to ensure DAC participation in planning for water access in remote areas served primarily by surface water i.e. San Joaquin Valley and other areas where there is historic and severe groundwater contamination/depletion and residents do not have the agency or ability to switch their drinking water source from ground to surface the way the surrounding farms do.

Part 2: Cross-cutting questions

As an overarching matter, how can California better listen to and integrate the perspectives of vulnerable communities, and address their needs, as it develops the 2017 update to Safeguarding California?

1. Budget for community engagement. This includes funding to support translation of key document, interpretation at key meetings and workshops, food for participants and child care.
2. Include and/or appoint community leaders and community organizations to key committees that will guide Safeguarding efforts.

3. Partner directly with local organizations to ensure strong participation by communities most impacted. This includes developing the agenda, structure of workshops and any evaluation mechanisms in consultation with local groups from start to finish.