



November 24, 2021

Amanda Hansen
Deputy Secretary for Climate Change
California Natural Resources Agency (CNRA)
1416 Ninth Street
Sacramento, CA 95814

Re: Draft Natural and Working Lands Climate Smart Strategy

Dear Deputy Secretary Hansen,

On behalf of Sierra Club California's more than 500,000 Sierra Club members and supporters and the Sierra Club's California 30x30 Task Force, we are pleased to submit the following comments and recommendations in support of the Draft Natural and Working Lands Climate Smart Strategy ("Climate Smart Strategy document"). Our comments are contained in this letter and a separate [Matrix](#) that summarizes our provisional positions on the 182 proposals in Section 6. We also support the comment letters from the Inland Deserts 30x30 Working Group, the 30x30 Statewide Coalition, and the Pesticide Action Network.

We strongly support CNRA's stated mission to better utilize California's natural and working lands and waters to fight climate change. We commend the state for taking leadership on this issue at a moment when our communities—and the natural life support systems on which they depend—are at severe risk from the climate crisis, loss of biodiversity, and other stressors. We appreciate the state's emphasis on approaches such as urban greening and forestry strategies; tribal co-management and use of traditional ecological knowledge; scaling of community land stewardship; infill development; workforce programs to advance equity goals; and more. We also note that the state already has many ongoing programs and partnerships, as summarized in Section 2 of the Climate Smart Strategy document, and some of these can, and should, be built upon to help stabilize the climate, protect ecosystems, and increase equitable access to nature and its benefits.

However, the Climate Smart Strategy document also contains assumptions and management approaches that we believe are contrary to the biodiversity and climate goals of Executive Order N-82-20. Moreover, if implemented, some of the recommended actions would undermine and

potentially negate the two other critical goals of the Executive Order—namely, to protect 30% of California’s lands and waters by 2030 and to remedy existing deep inequities in our people’s access to nature and its benefits.

We also find that the Climate Smart Strategy document in many cases provides general goals and principles that sound appropriate and appealing, but which often lack necessary and concrete information on how their associated strategies would be implemented/how these goals would be achieved. This makes it difficult to take an informed position in opposition or support.

Key concerns we have highlighted in our comments include:

- **The need for the state to fully integrate its commitment to 30x30 with its Natural and Working Lands Climate Smart Strategy.** Executive Order N-82-20 calls for both a comprehensive 30x30 strategy with enduring biodiversity protections AND better use of California’s lands and waters to address the climate crisis. Yet the draft Climate Smart Strategy document barely mentions 30x30 and is silent on how these two critically important programs will reinforce one another while promoting social equity. We urge the state to give high priority in the Climate Smart Strategy to 30x30 measures such as protecting large core habitats, wildlife corridors, and climate refugia. These approaches involve more limited management intervention while safeguarding critical ecosystem services and climate benefits.
- **The need for the state to act rapidly and decisively, in collaboration with federal and local governments, to stop the most obvious climate-harming activities on California’s lands and waters: the extraction and transport of fossil fuels.** The state should also help facilitate a just economic transition for local communities, and ensure that all oil and gas wells are properly decommissioned and surrounding lands and waters ecologically restored.
- **The need for the state to more holistically and accurately represent the climate value of ALL intact ecosystem types.** In particular, deserts should not be characterized as marginal and sparsely vegetated; coastal marine habitats should not be characterized as only a combination of wetlands, seagrass, and seaweed.
- **The need for the state to fully address the conservation and protection of California’s freshwater systems and resources.** We are concerned that they have largely been omitted from the Climate Smart Strategy draft.
- **The need for the state to amend the Forests section to avoid for-profit thinning projects outside of the wildland-urban interface and strengthen the protection of standing forests in backcountry areas.**
- **The need for the state to revise the Croplands section to set measurable goals to accelerate the reduction of pesticides and toxics, to shift toward biodiversity-based farming, to expand sources of input to compensated carbon farming practices, and to strengthen social, health, and economic development measures for low-income farmers and communities.**

Overall, we urge the state to more carefully and concretely define its Climate Smart policy proposals before finalizing the document—especially to ensure that none is in conflict with the

30x30 goals of Executive Order N-82-20. We recognize that the Climate Smart Strategy document is still preliminary and are eager to continue collaborating with CNRA and other partners in refining the draft proposals to be not only actionable, but truly beneficial for climate, natural systems, and people.

Section 1: Introduction

The term “Nature Based Climate Solutions” is defined on page 5 as “...an umbrella concept being used across the world to describe a range of ecosystem-related approaches that protect and restore nature to deliver multiple outcomes, including addressing climate change, protecting public health, increasing equity, and protecting biodiversity.” We support this definition and urge the state to ensure that actions taken in the name of Nature Based Climate Solutions indeed substantially protect and restore nature.

In its substantive Priority Actions and Approaches, CNRA’s draft Climate Smart Strategy document largely fails to center the importance and urgency of protecting and restoring 30%—and soon thereafter at least 50%—of our state’s natural, unmanaged, and lightly managed lands and waters. Protecting intact ecosystems should be foundational, not incidental, to the state’s Climate Smart Strategy because such conservation simultaneously addresses multiple interconnected and critically important needs: stabilizing the climate, reversing the extinction crisis, and safeguarding human life support systems.

On page 12 the draft Climate Smart Strategy states that,

“We need to move beyond managing endangered species at the brink of extinction to a more holistic approach that keeps our plant and animal communities healthy and resilient to climate change and our world-renowned biodiversity intact. Conserving and restoring nature, which hosts our state’s range of diverse ecosystems for all life forms, is central to protecting our biodiversity. Nature-based solutions on both natural and working lands play a critical role in supporting this shift.”

We wholeheartedly support this statement of principle, yet find that most of the draft Climate Smart Strategy document is concerned with active management interventions rather than with nature-based conservation. Of particular concern is the strong emphasis on managing forests through commercial thinning and post-fire logging—which are not proven to enhance carbon storage and can harm wildlife habitat as well as ecosystem services for people. And it is likewise concerning that “Aligning with global 30x30 and Nature Needs Half” is conspicuously absent from the Climate Smart Strategy document’s five overarching goals on page 13.

As we emphasized in our September 3, 2021 comment letter on 30x30 in California, the first priority should be to end policies and practices that harm nature, the climate, and people. Therefore, the Climate Smart Strategy document should address the urgent need to end the most obvious climate-harming activities on California’s lands and waters: the extraction and transport of fossil fuels. While these activities often occur on federal or private lands, the state

has regulatory powers and should apply all the leverage it has to expediently stop fossil fuel extraction, ensure that all oil and gas wells are properly decommissioned, and that surrounding lands and waters are ecologically restored. The state must also partner with business and government to implement a just transition toward sustainable, family-supporting jobs in the affected communities.

In its definition of the eight Natural and Working Land types, the Climate Smart Strategy document undervalues or mischaracterizes the climate stabilizing value of intact habitats generally, and of specific types—especially coastal zones as a whole (not just areas with wetlands, seagrass and seaweed), deserts, chaparral, and grasslands—in particular. These concerns are noted in their respective sections.

Section 2: Work Underway

We applaud many of the state’s existing programs and policies that protect nature, help stabilize the climate, and advance equitable access to nature and its benefits. However, the state has programs and policies that can and sometimes do actually undermine these pressing goals—for example CALFIRE’s emphasis on aggressive vegetation management, logging, and thinning. We urge the CNRA to carefully address these potentially problematic programs and policies in the final strategy document.

It is imperative that the state’s stewardship of its lands be more fully and consistently funded and there should be a priority on increasing the number and size of State Wildernesses, of which we currently have 12.

Section 3: Priority Actions and Approaches

Forests

We support the “Proposed Nature-Based Solutions” that genuinely prioritize conservation of forests. On page 10, the Climate Smart Strategy document states that:

“Climate-smart forest management reduces the threat of catastrophic wildfire and supports long term carbon storage. Nature-based solutions that address climate change in our forests also capture and clean our water supply, improve air quality, provide habitat for wildlife, create high-road jobs, and support local economies through tourism, recreation, and forest products.”

We agree with the stated goals and, in addition, emphasize that forest management should ALSO consider and support short-term carbon storage. Any intervention should be carefully planned using the best available science, devoid of undue influence by economic interests that would seek to alter—to the detriment of climate, habitat, equity or other key goals—the scale or location of the project as well as the method by which the project is conducted. Also, exempting any forest projects from environmental review runs counter to sound management, environmental protection, and responsible public engagement.

We strongly support the general statements in proposed Solutions C and G regarding restoring forest riparian areas and reconnecting aquatic habitats.

Below are further comments on other forest proposals in the draft Climate Smart Strategy document:

- A. *Advance proactive vegetation management, ecological thinning, managed and science based grazing, prescribed and cultural burns, and managed natural wildfire to reduce the risk of catastrophic wildfire.*

We encourage the Agency to prioritize the use of managed fire whenever safe and possible. We also support the use of prescribed and cultural burns as these options—along with managed fire—are most capable of producing ecological results that support resilience and biodiversity as well as climate goals. However, the state must vary its approach according to regions when implementing prescribed fire as it can lead to type conversion in chaparral ecosystems.

The Agency should be exceedingly careful when planning and using ecological thinning. Even if the desired outcome is for a more resilient and natural forest than currently exists, the state should not remove any environmental review from forest management. Projects must be planned using the best available science on a case-by-case, site-by-site basis. They should also be completed—particularly outside of the wildland-urban interface—without any economic incentives (such as selling of logs or bioenergy) as these have the potential of turning a thinning project that was limited in scope and impact into something that instead becomes a major logging project for the primary benefit of the timber industry.

- B. *Increase active reforestation efforts in areas recovering from severe wildfires and suffering from reduced natural regeneration as a result. Timely post-wildfire reforestation efforts can also prevent conversion of forest to shrublands and reduced water storage capacity in watersheds.*

Active reforestation efforts should prioritize areas that have already been clear cut or heavily altered during commercial logging operations. Many areas already severely affected by human activities are unlikely to regenerate to a natural state. Instead, they will be ripe for invasive grasses, losses of sequestered carbon, and even a diminished capacity for future carbon sequestration. Clear cut or heavily logged areas are also more likely to be accessible via existing logging roads.

Post-fire restoration must be approached with an abundance of caution. Many trees lose their needles in wildfires but are still alive and will be green within a year. Even completely charred trees provide critical habitat and other ecological benefits and continue to sequester carbon. The state should preserve large trees, even if they appear to be dead, that are not a risk to human life or in danger of falling on homes, buildings, roads, or other infrastructure.

It is a massive risk to reforest an area that may naturally regenerate if given the time. There is low risk in reforesting an area that has been decimated by clearcuts or intensive commercial logging, as long as the replanting is ecologically-based and does not create dense monoculture plantations. Therefore, the state should use limited resources to reforest such areas first.

E. Increase commercial thinning to achieve disturbance-resilient forest structure on federal and privately owned forested parcels.

The state should not allow commercial thinning outside of the wildland-urban interface on its own public lands and should encourage federal land managers to exclude the influence of the profit motive from any thinning projects on federal lands. Thinning that is intended to reduce the wildfire risk to lives and property should occur at the wildland-urban interface, not in the backcountry. All thinning projects should be planned and conducted to achieve healthy, resilient forests and be focused on reducing risk to communities and infrastructure. Commercial thinning typically involves extracting large (fire resistant) trees and removing large amounts of small trees in a manner that is as inexpensive (destructive) as possible.

If the end use for the trees removed during commercial thinning is lumber, these projects are exceedingly likely to occur in areas that are nearest to sawmills, whether or not these are the areas that are in the most need of restoration. If the end use is bioenergy, the projects will likely occur near existing, polluting biomass incinerators and will be conducted at high cost to ratepayers. The bioenergy end use is particularly troubling in this case as the implication of commercial thinning is a public-private partnership. The private sector provides some funds and labor and, in return, the public allows the private sector to extract resources. However, in the case of bioenergy, the public is forced to buy energy at astronomically high rates under the BioRAM and BioMAT programs. As a result, the public's money is used to extract resources from land the public owns in a manner that is less desirable for the environment and in areas that will not provide the largest benefit to the public by way of climate resilience or wildfire safety.

Shrublands and Chaparral

As the draft Climate Smart Strategy document alludes, California's chaparral ecosystems—and the environmental and human impacts to these landscapes—are not as robustly considered in climate evaluations and planning due to a lack of understanding of their carbon dynamics. Given the extensive presence of chaparral in the state, we must invest in and expand our understanding of this landscape's contributions to climate resilience and adaptation through its potential for above and below-ground carbon storage. We agree with the statement that additional study is needed to determine appropriate management actions and to set carbon storage targets for chaparral ecosystems. We encourage the state to prioritize setting up partnerships with academic institutions and other relevant stakeholders to build our understanding of the chaparral ecosystem's carbon storage and sequestration and ecosystem services.

We strongly support the recommended nature-based solutions and are supportive of the incorporation of Traditional Ecological Knowledge and cultural burning practices, but caution against the use of fire where it would lead to landscape conversions that allow more flammable, invasive species (which is what we see frequently today). Such landscape conversions merely increase risk of future harmful fires.

Croplands

We support many of the proposals in the Croplands section, such as D, “Protect agricultural lands from development through conservation easements”, E, “To increase water and nutrient use efficiency,” and I, “Maximize participation of socially disadvantaged farmers in existing programs.” However, many of the policy recommendations do not go far enough or should be reprioritized. For example, farmland preservation saves more greenhouse gas (GHG) emissions than any other land use intervention and so should be the highest priority strategy in this section. Likewise, a more robust strategy is needed for farmland preservation.

We commend reference in the Croplands section to Rattan Lal’s 2015 paper¹ and recommend strengthening the Climate Smart Strategy document to align with a holistic systems approach. We further recommend two additional strategies below: protection for farmworkers and minimum procurement requirements for state food programs or “public kitchens” to affect the demand and supply for local, organic, and plant-based farm products.

Industrial agriculture in California is a major contributor to our state’s GHG emissions, loss of wildlife, depleted water resources, and human health impacts. We have signed a separate letter from Pesticide Action Network-North America (PANNA) addressing these pressing concerns and recommending measurable goals to reduce the use of agricultural pesticides and toxics, increase acreage in organic crops, and protect farmworkers.

As noted, we strongly support several of the policy proposals in the Croplands section of the Climate Smart Strategy—especially D, E, and I. Below are our comments and recommendations for other Croplands policy proposals:

- A. Scale up soil health practices for carbon storage, climate resiliency, soil water retention, improved water and air quality, integrated pest management, biodiversity and more. Practices include, but aren’t limited to cover cropping; production and application of organic amendments, such as compost; hedgerows; grass filter strips; minimum or no-till; and incorporation of livestock for managed and science-based grazing.*

We recommend refining and reprioritizing strategies for soil carbon sequestration on croplands. The introductory narrative about carbon sequestration includes listed practices that should be revised to more closely respond to Lal’s call for a “complete Conservation Agriculture package” starting with “a sufficient quantity of crop residue mulch.” Practices should be prioritized within

¹ Rattan Lal. Sequestering carbon and increasing productivity by conservation agriculture. *Journal of Soil and Water Conservation* May 2015, 70 (3) 55A-62A; DOI: <https://doi.org/10.2489/jswc.70.3.55A>

the context of how they support progress on a continuum toward Lal's Conservation Agriculture system or what we propose to call a biodiversity-based farming system, rather than be presented as an unprioritized buffet of practices from which growers may select one or more. Specifically, we recommend this sequence:

1. retaining crop residue on the surface as explained in Lal's paper,
2. cover cropping, which is currently not listed, and a multi-species cover cropping practice with a reward for seven species (four species are required by the United States Department of Agriculture (USDA) Conservation Stewardship Program (CSP) Conservation Practice 340.
3. crop rotations,
4. organic soil amendments and practices that increase biodiversity and encourage continued growth of below-ground microbial biology—practices such as intercropping, companion planting, combinations of perennial and annual crops, and multispecies cover cropping,
5. minimizing tillage and ripping the soil only as needed; this can support, along with the above practices, optimal integrated nutrient management, and
6. hedgerows and diverse edge plantings, that are beneficial from a biodiversity more than a carbon farming perspective.

Metrics and data are needed to verify soil carbon and to forecast time horizons and durability. Paying now for more soil samples will scale the database for increasingly reliable modeling. Doing more sampling at depths greater than ten inches—evaluated relative to soil type and the depth of the compaction layer—is likely to raise the value of a biodiversity-based farming system. Soil sampling by grantees should be funded and done independently by acceptable reference laboratories and protocols.

The idea that there are “knowledge gaps” demonstrates a reductionist view that does not lend itself well to understanding complexity. USDA and the California agencies have relied too heavily on the knowledge published in peer-reviewed journals in order to try to understand and make predictions about enormously complex biological relationships. An important feature of the Healthy Soils Program demonstration projects should be to facilitate consultation among experienced observers whose knowledge is guided by intuitive insights about data analysis. We can progress much faster with more guidance from successful practitioners in a community of inquiry consulting about different farms in a region. A need for greater consensus among experts should also not be treated as a “knowledge gap” but rather as a question for on-farm experimentation.

B. Develop more comprehensive vulnerability assessments for agricultural lands that integrate biophysical and environmental stressors, heat, and socioeconomic factors.

Comprehensive vulnerability assessments should be within a framework of categorization of farming systems which Lal describes as “...a holistic and system-based approach to soil management as the engine for increasing productivity by improving efficiency and making agriculture environmentally compatible is more important now than ever before.” There is an

inverse correlation between some of the most threatening vulnerabilities and a suite of practices that build soil carbon sequestration in a farming systems continuum.

C. Promote comprehensive farm management plans, such as whole-farm conservation plans, carbon farm plans and organic system plans.

Comprehensive farm management plans are needed within our proposed farming systems framework. Metrics and indicators should include baselines, goals, targets, and benchmarks for a transition to more biodiversity-based systems. A values framework is needed to establish a baseline and data collection to track measurable geospatial, ecological, or 'biotechnical' goals for biodiversity. Lal defines Conservation Agriculture as “a farming system comprised of crop residue mulch, cover cropping, Integrated Nutrient Management (INM), and no-till (NT) techniques in a rotation cycle for effective soil and water conservation, Soil Organic Carbon (SOC) sequestration, sustainable intensification, and climate change adaptation.” Farm management plans as well as payments for conservation practices need such a systems framework. Paying the majority of farmers to implement one “climate-smart practice” as in the Healthy Soils Program (HSP) is unlikely to achieve the conservation of biodiversity and climate mitigation, resilience, and adaptation that we want.

Insights about a systems framework are found in the review of the subject by Therond, et. al. 2017². The authors characterize farming systems as either chemical input-based, biological input-based, or biodiversity-based—a biotechnical framework which the authors distinguish from a socioeconomic or overarching agroecological framework. There is an obvious ranking or metric for lower and higher levels of biodiversity that should correlate with potential increases and durability of carbon sequestration.

We suggest that regional strategies use the term ‘biodiversity-based farming systems’ rather than ‘regenerative agriculture’ to ensure that use of the term “regenerative” does not suggest a necessary integration of cattle and cows on farms. Such a biotechnical framework for farming systems would give measurable objectives to farm management plans aimed at “scaling up soil practices” to ensure durable transition. This goes beyond an Organic System Plan (OSP) or a Natural Resource Conservation Service (NRCS) Conservation Plan that both currently simply describe the practices and procedures an applicant chooses without providing a metric or a continuum for system transition goals. A framework would make it possible to not only set and achieve ambitious regional goals, but would make possible the ranking of grant applications on a continuum that achieves more resilient farming systems.

The Climate Smart Strategy draft states, “There remain knowledge gaps around how long carbon is stored through carbon farming practices.” However, the type of farming system is

²Olivier Therond, Michel Duru, Jean Roger-Estrade, Guy Richard. A new analytical framework of farming system and agriculture model diversities. A review. *Agronomy for Sustainable Development*, Springer Verlag/EDP Sciences/INRA, 2017, 37 (3), 24 p. <10.1007/s13593-017-0429-7>. <hal-01607390>]

critical to the durability of benefits as well as the speed with which they grow. Most priority conservation practices done in a biodiversity-based farming system are implemented once and continue to grow benefits, and can produce even more benefits through one or more isolated or continuing or overlapping practices. For example, when contour and key line plowing and other stormwater management interventions are in place—along with a cropping plan with multi-species vegetation—then compost teas, extracts and various other biostimulants have the air and water in the soil needed to feed a vigorous soil foodweb in one season. Such vigorous foodwebs can grow deeper root systems year after year down to the compaction layer with no inputs. Site-based suites of practices and sequences of implementation can be showcased in the HSP Demonstration Projects where top soil foodweb practitioners can be invited to observe and consult together about overall strategies that will help a farm become more biodiversity-based.

D. Protect agricultural lands from development through conservation easements.

Farmland preservation requires attention to durability of conservation easements. Training in biodiversity-based farming systems and help with land access for farmers along with procurement policies to build local markets are fundamental for farmland preservation in the face of increasingly extreme rain events.

F. Increase managed groundwater recharge on working croplands that capture rain and storm runoff as well as redirection of water during periods of extended high flows to allow water to sink into aquifers, in a manner that does not exacerbate water quality issues and ensures diversions are protective of native fish and wildlife.

Groundwater recharge, despite admirable efforts, is happening too slowly by the groundwater sustainability agencies (GSAs). Incentives are needed for transition away from erosive farm crop and tree row planting layouts and practices. The use of contour and keyline plowing to infiltrate water must become the norm. Incentives are needed for farmers to transition from annual to perennial crops and regenerative orchard systems with mowed perennial cover crops. A one percent increase in Soil Organic Matter (SOM) per acre increases water infiltration and soil water-holding capacity by 20,000-25,000 gallons of water per acre indicating the importance for groundwater from setting goals for transition to biodiversity-based farming systems that have biologically active soil food webs producing SOM.

H. Enhance circular economies for organic waste utilization, including manure and biomass through compost utilization, manure markets, whole orchard recycling and mulch utilization.

Organic waste utilization is critical to urgently reverse methane emissions. SB 1383 programs to institute recycling and food waste recovery need to be part of Opportunity #74 to build public awareness about their importance. Reducing methane emissions from manure management and enteric fermentation will require much more effective programs that can be expected to reduce herd size. Manure-generated methane is currently not included in the quantification

methodology by CDFA or CARB for estimation of GHG reductions from use of compost application to build soil carbon. The methane emitted from the making and application of manure compost may nullify the benefit from soil carbon dioxide sequestration from this practice.

The metric for tracking methane furthermore does not reflect its significant impact, because the Global Warming Potential (GWP) of methane is 85 times greater when one uses the 20 year window used by the Intergovernmental Panel on Climate Change (as opposed to the 100 year window used by CARB). Consequently the state could better track and measurably reduce the methane from California's 1.7 million dairy cows (18 percent of the US) and 5.2 million head of cattle (5 percent of US) if it used the more meaningful calculation to show the global warming caused by livestock methane and raise public awareness about it.

We suggest consideration of a cap and fee system for methane such as combining a rapidly-declining allowable methane emission cap with a robust methane emission fee per ton. A robust public awareness campaign would include promotion of a shift toward more plant-based diets.

L. Advance safer, more sustainable pest management practices and tools to support the accelerated transition away from harmful pesticides.

Accelerating the transition away from harmful pesticides should be a higher priority among nature-based solutions for croplands as explained in a joint comment letter with Pesticide Action Network-North America and Californians for Pesticide Reform and organizations advocating environmental justice for farmworkers. The joint letter calls for a 75 percent reduction in the use of hazardous pesticides and an increase of 30 percent organic acreage by 2030 with inclusion of farmworkers in strategic planning and protections. Social indicators should include measurement of pesticide exposures by monitoring emergency department visits and hospitalizations and surveys of cancer clusters in neighborhoods around farms that routinely use carcinogenic materials. There should be more biochemical studies like the Chamacos Cohort Study to detect chronic health impacts from long-term intergenerational exposure to chemical pesticides.

Healthy Soils Program grantees should be required to stop using pesticides that are known to harm the soil foodweb. Applications for grants by farmers that use pesticides which are likely to decrease soil foodweb health and carbon sequestration should rank at the bottom in the distribution of available funds.

Strategies that advance social equity and address social vulnerability must be more prominently centered in the listed priority solutions like strategy B to assess farm vulnerability. A socioeconomic vulnerability assessment must address the environmental injustice that pervades the agriculture industry. The most important corrective strategies are absent in the Croplands section and in the Opportunities list.

In addition to the refinements above, we recommend adding the following Croplands strategies to protect farmworkers and to implement food procurement policies that support small local, organic, and BIPOC farmers and to support a shift in food procurement policy towards less carbon intensive diets.

1. **Protection of farmworkers** is mentioned at the end of Opportunity #182 to “prioritize programs and projects that provide co-equal benefits of health and safety improvements for farmworkers exposed to extreme heat and wildfire smoke”. Farmworkers are exposed to additional hazards and injustices including but not limited to pesticide and dust exposure, bad ergonomics, lack of breaks and hygiene facilities, wage theft, and harassment. The California Occupational Safety and Health Administration (Cal-OSHA) must provide the same protections and monitoring of workplace conditions as for any other employee. Creating Farmworker Resource Centers like the one in Ventura County should be a top priority. The Ventura County center provides support in appropriate languages to connect workers to the appropriate agency among a myriad of agencies that could help them. Part of the mandate of Farmworker Resource Centers must be to support those making reports about acute pesticide exposure as well as illnesses that could have been caused by cumulative effects that should be covered by Workers’ Compensation.

Strategies for social and economic justice for farmworkers would benefit from a parallel values-infused framework to set goals and targets. The best models for screening and verifying a minimum level of best practices can be found in the [Good Food Purchasing Program](#) and the [Food Justice Certified Label](#). Many organizations are working on how consumers can recognize farms that take care of their employees and communities. Leaders can consult about a framework and continuum for ranking achievement by farms on practices that promote social and economic justice so that the state can create goals, targets, and programs to ensure justice on California farms.
<https://foodtank.com/news/2020/02/24-organizations-finding-food-justice/>

2. **Incentivize the shift to more local food security and sovereignty and less carbon intensive diets.** We commend Opportunity #143 for food procurement policies that require increasing percentages of food bought by state food programs such as school lunches, state-funded hospitals and prisons, i.e. state-funded public kitchens, to buy climate smart products. This should be featured as a strategy.

Minimum procurement requirements with a gradual annual increase in percentage can be adopted for certified organic or equivalent designation, locally-grown and plant-based alternatives to meat and dairy products. An incentive program for buying locally produced food also requires a more meaningful definition of, or term for, ‘locally grown’ because the current legal definition is the same as ‘grown in California.’

Procurement by public kitchens can set the pace in the shift to plant-based diets throughout the food economy to help slash livestock methane emissions, save water,

and increase the demand and production of legumes, vegetables, fruits, and grains in alignment with the USDA Dietary Guidelines. A “50 per cent plant-forward” shift can reduce food-related carbon and methane emissions and the climate cost of producing water intensive livestock feed in our drought-stricken state.

Wetlands

We support the majority of proposals for Wetlands in the Climate Smart Strategy document except for:

“E. Encourage conversion of Delta tidal wetlands to rice cultivation and managed wetlands in the deeply subsided area of the Delta to stop subsidence and resulting carbon emissions.”

This is incompatible with D, which calls for the restoration of Delta tidal wetlands to improve ecological function and food protection—a goal we strongly support.

The state should undertake ambitious wetland restoration and protection programs. California currently has a state-wide no net loss policy for wetlands. We urge the state to require a substantial net gain in wetlands by 2030, since California has already lost nearly 90% of its historic wetlands.

Overall, the Climate Smart Strategy document lacks an urgent focus on the protection and restoration of freshwater resources; this should be remedied before it is finalized. The protection and restoration of state waters including stormwater and urban as well as rural water conservation and restoration of small water cycles should be prioritized in all landscapes as these areas are critical for biodiversity protection. We urge establishment of an accelerated program to reintroduce beaver. This applies to upland watersheds in every region (except the Inland Desert Region but including areas near the Colorado River where a return of beaver would support restoration of biodiversity as it would in most watersheds in the state).

Overall water saving strategies and incentives are vital to increasing and maintaining vegetation for all land types, including promotion of use of grey water for residential landscaping, rainwater capture, and budget or allocation-based rate structures like the model program in the City of Irvine with use of the California Data Collaborative tool.

Seagrasses and Seaweeds

While wetlands, seagrasses, and seaweeds are important, this characterization misrepresents the ecological importance of coastal marine ecosystems as a whole. This should be remedied before the Climate Smart Strategy document is finalized. Protection and restoration of seagrasses and seaweeds in their natural ranges should be prioritized but broader aquaculture and “farming” of kelp and other species should be approached with caution to ensure that other native species are not disturbed or displaced.

Solution C should be amended to include expansion of the statewide network of marine

protected areas.

Developed Lands

We appreciate and strongly support the recommendations in this section on green infrastructure, urban forests, and restoration of riparian areas in cities. However, a high percentage of developed lands are paved areas at metropolitan and regional scales—not just in local communities. Therefore, we feel it is a grave omission not to specifically call out and prioritize opportunities to improve these vast areas of degraded lands for the benefit of people, climate stabilization, and biodiversity through similar strategies of increasing vegetation, removing impervious pavements, promoting water capture, and more. Additionally, utility corridors and water infrastructure both inside and outside urban areas could offer co-benefits as well—including use for renewable energy generation, native species habitats, and in some cases, added recreation areas for people.

An action should be added to: “Involve California Public Utilities Commission (CPUC), California Energy Commission (CEC), and California Air Resources Board (CARB) to address existing policy barriers to distributed energy resources.” For example, the Transmission Access Charge (being levied on locally generated electricity which does not use the transmission grid) makes local solar generation less competitive with remote large-scale solar projects. This incentivizes the unnecessary and often harmful industrialization of additional natural and working lands when there is a better alternative—distributed PV which brings non-energy benefits such as local jobs, energy resilience, and (when coupled with batteries) improved urban air quality by allowing retirement of natural gas plants.

Grasslands

Livestock grazing has severely degraded native grasslands in our state, as well as many forest, shrubland, chaparral and desert areas. We are concerned with the repeated and inadequately explained promotion of grazing as a proposed nature-based solution in the draft Climate Smart Strategy document. Livestock grazing is unlikely to achieve ecologically beneficial results. It has not been shown to mimic naturally occurring wildfire and can damage native soils, reduce natural carbon storage, degrade wildlife habitat, and introduce invasive species to an area. To be counted as protected under 30x30, we believe that grazed lands should as a bare minimum meet—but not be limited to—the following qualifications:

- Grazed lands must be dominated by native grasses and forbs and contain healthy and diverse populations of native plants and animals,
- No water diversions remove water resources from their sources or natural courses,
- Roads are minimal,
- Fences do not obstruct wildlife movements or endanger ground dwelling birds, mammals, and reptiles.

Sparsely Vegetated Lands

The characterization of deserts in the category "sparsely vegetated lands" is problematic in its failure to recognize the climate values of desert vegetation and soils—it is not an accurate

comparison to lump desert lands together with beaches or with landscapes covered in rock, snow and ice. As detailed in the [Inland Deserts 30x30 Working Group comment letter](#), there is quite significant work already being done to understand the climate impacts of disturbances on desert soils, and these studies need to more robustly inform our understanding of the climate values of desert carbon sequestration--and the actions needed to preserve that carbon sequestration ability. California's deserts represent a large proportion of the state's total area (one quarter of the state) and are relatively undisturbed by human activity. The draft strategy document could do more to reference both available and emerging science on the role desert vegetation and undisturbed soils play in mitigating climate change. Inland deserts account for 10% of the state's total stored carbon and 7% of carbon-rich areas in California deserts may already be impacted by human activities. Ensuring sufficient desert representation in conserved areas will also protect unique species assemblages and ecosystem services.

Section 4: Tracking Progress and Measuring Outcomes

To facilitate tracking and measurement, funding provided by the state—specifically including the Healthy Soils Program and other soil conservation programs—should include a requirement for project/partner *data sharing* on a set of core indicators, including quantitative carbon outcomes, in addition to relevant process measurements. While geospatial modeling will continue to provide estimates of assumed carbon and GHG impact, the strategy should build in extensive direct measurements for verification of modelling. Direct measurements should be based on appropriate sampling frames and the use of acceptable reference tests and/or laboratories. Data collection, e.g. processing of soil samples, should be funded independently of the program.

"Number and Diversity of Partners," while a helpful metric listed in multiple realms for tracking progress and outcomes, should also speak to the *quality* of partnerships being built so as to ensure that boxes are not simply being checked. For Partnerships and Demonstration Projects, Catalyzing Investments, and more, it will be critical that partnerships are collaborative, build the capacity of local governments and communities, and build sustained engagement and investments in the 30x30 strategy. We urge the state to further elaborate on how partnerships will meaningfully serve communities and further define what success of partnerships looks like beyond simply numbers and diversity. In addition, "diversity" should be more clearly defined as it relates to this effort—economic, geographical, experience, industries, etc.

Under "Tracking and Catalyzing Investments," metrics should speak to equity investments by tracking how public and private investments will be prioritized for historically marginalized communities and communities that lack access to green space.

With respect to "Additional Metrics for Success," we strongly encourage the state to partner with impacted communities to flesh out the "Social Justice/Equity Indicators" and "Public Health Indicators" to develop metrics for measuring success that will best reflect the needs, priorities, and visions of these vulnerable communities. Under "Ecological Indicators," please consider including metrics to track wildlife corridors and connectivity—including but not limited to number,

location, and quality of constructed wildlife crossings over highways, as well as long-term health and viability impacts to species. We applaud the inclusion of undisturbed desert landscapes as an Ecological Indicator, considering the reality of the important, but unfortunately undervalued, capacity of intact and undisturbed desert ecosystems for sequestering carbon.

We agree with the recommendations listed under “Enabling Policy,” which are all critical areas for improved understanding to advance nature-based climate solutions. We hope that CNRA can provide more details and clarity on how the state will meaningfully approach tracking, evaluating, and adjusting policies to advance these solutions. At present, too many existing policies provide real barriers to meaningful action and in many other areas we lack more detailed policies that can advance our shared priorities.

Section 5: Regional Profiles

This section is useful in describing how the CNRA defined its nine regions and summarizing some of the input received during the public workshops. Because there are no clear CNRA recommendations or action priorities provided, we have limited our comments to the following:

- For the reasons outlined in our above comments re: grazing in the Grasslands section,
- We support, for all regions where it is stated, "building Tribal capacity to manage and steward lands, through increased co-management."
- We support for all regions strategies that keep landscapes intact, expand and protect wildlife and habitat corridors in a coordinated statewide plan, and manage lands holistically, as well as strategies that increase urban parks, connect parks with green corridors, and restore native trees and plants.
- Regarding the Inland Desert region, the articulated boundaries for this region are too restrictive and fail to include additional important desert space, to the north and west of the identified area.
- The state must ensure adequate support for communities needing help to plan and implement managed retreats from the coast and high flood risk areas.
- The state should develop programs for ecosystem restoration of the oilfields in the San Joaquin, Los Angeles and Central Coast Regions.

Section 6: Opportunities to Scale Action

We include a separate [Matrix](#) showing our provisional positions on the 182 proposals in Section 6.

We thank you for the opportunity to comment on the draft Natural and Working Lands Climate Smart Strategy document and look forward to participating in making it a truly effective tool in healing our climate and protecting California’s lands, waters, wildlife, and communities.

Sincerely,

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