FUNDING THE TRANSITION: INVESTMENT STRATEGIES FOR AGRICULTURAL SOLUTIONS TO THE CLIMATE CRISIS

PLATFORM RECOMMENDATIONS AT-A-GLANCE

- Invest State and Federal Resources in Multi-Benefit Solutions
- Invest State and Federal Resources in Underserved Producers
- Target Bond Investments in Food and Agriculture Systems, Resilience, Equity
- Invest Special Funds, Fees in Scaling Up Agricultural Climate Solutions
- Develop Private–Public Partnerships, Focus on Supply Chain Resilience and Regional Innovation
- Invest Philanthropic Funding in Regional Innovation, Equity

A CLIMATE PLATFORM FOR CALIFORNIA AGRICULTURE

This is one in a series of CalCAN policy briefs that describe approaches to moving California agriculture boldly and quickly toward a carbon-neutral and climate-resilient future. Together, they make up *A Climate Platform for California Agriculture.*

Access the full report at: calclimateag.org/ca-agriculture-climate-platform

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INTRODUCTION

Investing in natural and working lands climate solutions is like retirement savings: it takes time and ongoing investment to reap the rewards of improved carbon stocks, reduced emissions, and greater resilience of our lands. California's leadership on climate change policy and investment is clear but it also suffers from the boom and bust cycles of the state tax revenue system and disproportionate political focus on urban industrial climate fixes over the long-term climate solutions of natural and working land conservation and restoration.

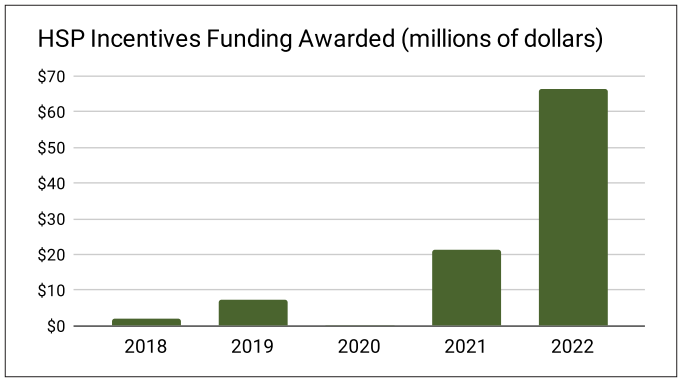
Beginning in 2014, California launched a suite of Climate Smart Agriculture programs.[137] In the initial years of the programs, funding came from the state's cap-and-trade auction revenue, which is deposited in the Greenhouse Gas Reduction Fund (GGRF). The amount of funding available to Climate Smart Agriculture programs depended, in part, on the highs and lows of the carbon price during the quarterly cap-and-trade auctions. New funding briefly became available to some of the programs, in 2018, when the SWEEP and the Healthy Soils programs both received Proposition 68 bond funding. In more recent years, as fewer of the GGRF dollars were available for annual appropriation, bond funds were spent, and as the General Fund increased, the vast majority of program funding shifted away from special funds to the General Fund, with some exceptions.[138]

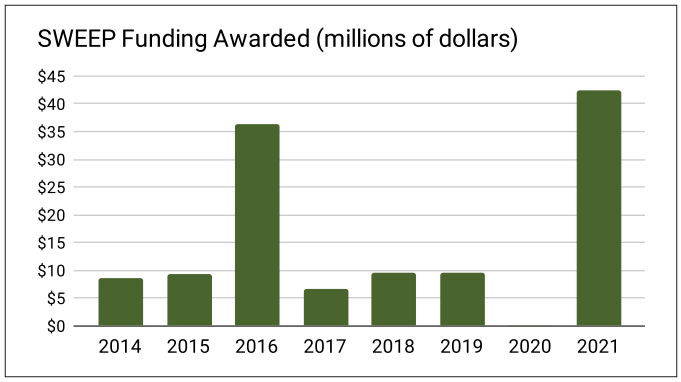
Photo Credit: USDA Photo by Lance Cheung

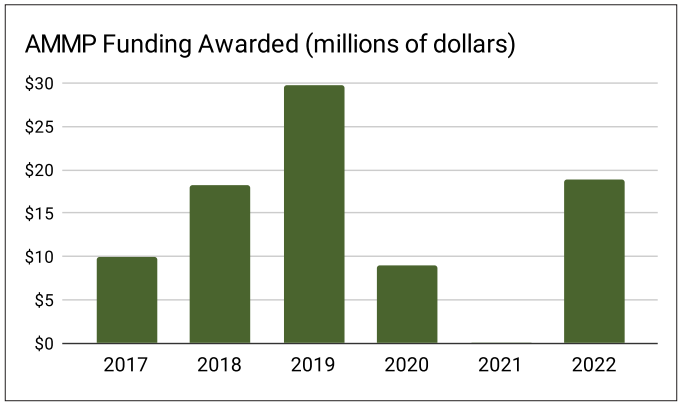
[137] For more details on the CSA programs, see Part 1 of the Platform: State of the State: Taking Stock of a Decade of Progress in California Agriculture.

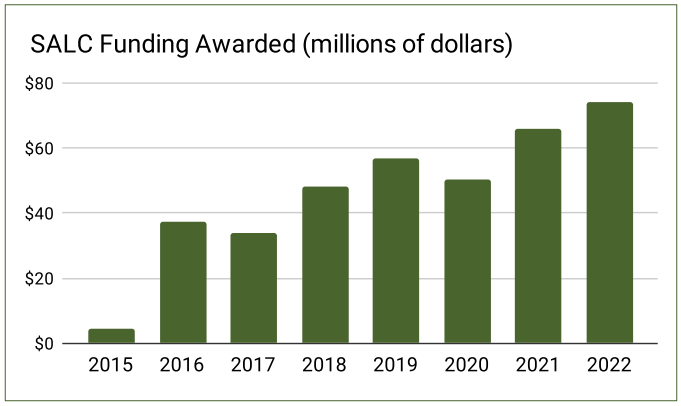
[138] For more on GGRF, see the Legislative Analyst Office 2023 report: Cap-and-Trade Spending Overview; SALCP receives a portion of the Strategic Growth Council's continuous GGRF appropriation.

Variation in Funding Levels for Climate Smart Agriculture Programs









Beginning in 2021, the state of California, under Governor Newsom's leadership and the leadership of the legislature, pledged $54 billion in climate change–related investments, including natural and working lands climate strategies.[139] However, as the state careens from a record surplus to state budget deficit projections, those investments are at risk of cuts. This can hurt the ability of the state to achieve the long-term benefits of its climate strategies, especially those offered by our natural and working lands.[140] The state will need a diverse funding strategy to support climate investments, including in natural and working lands strategies.

We reached out to others working on natural and working lands policy and budget strategies to better understand how we might achieve more stable and diverse funding needed to make a difference on the ground. We also offer our cautions on the carbon market. Our findings and recommendations are below.

FINDINGS

Gains in Understanding of Nature-Based Climate Solutions

There was agreement among those we interviewed that progress has been made in California in elevating natural and working lands climate solutions among state policymakers and stakeholders. This progress, they argued, resulted in greater state investment in recent years in natural and working lands climate strategies. Interviewees highlighted Governor Newsom's executive order in 2020 on advancing natural and working lands climate solutions[141] and the Natural and Working Lands Climate Smart Strategy[142] which was followed by significant state investments in those solutions in 2021–22 and again in 2022–23. They noted the inclusion of natural and working lands in the 2022 Scoping Plan Update, which is considered imperfect but an important start. They also highlighted the federal investments in agricultural climate solutions in the Inflation Reduction Act of 2022.

[141] Executive Order N-82-20.

[142] California Natural Resources Agency. Expanding nature-based solutions.

Interviewees also noted that urban-focused, technological, and industrial solutions (e.g., industrial carbon capture, etc.) still dominate the climate policy discussions and investments in the state. They also highlighted a strong need to continue to improve the understanding and importance of natural and working lands in achieving the state's climate goals, including resilience.

Carbon Offsets Have Hampered Natural and Working Lands Climate Efforts

There was also agreement among the interviewees that the focus on carbon offsets from natural and working lands over the past 10 years or more has hurt efforts to advance climate solutions, including efforts to seek state funding for natural and working lands climate projects outside of market mechanisms. Those policymakers and stakeholders are skeptical of the carbon market and concerned about allowing large polluters to avoid some of their own GHG emissions reductions through the offsets from forests and farms. They suggested that offsets have fueled a reluctance among some to advance natural and working lands climate solutions. Some of our interviewees supported moving away from offsets and focusing on natural and working land projects that are not intended as offsets and focusing those projects on incorporating improved resilience along with emissions reductions and carbon sequestration.

Carbon Markets Fail to Support Ag Climate Transformation

In 2012, the state of California launched its cap-and-trade program, a market-based program intended to reduce GHG emissions from the largest climate polluters in the state. The program allows unregulated entities like farms to sell offset credits to the polluters in exchange for using approved practices that reduce GHG emissions. The complex protocols that determine eligibility can take years to develop, and they must ensure the practices are additional, verifiable, and permanent. There are only two agriculture offset project types available, both aimed at reducing methane emissions. One is for rice management practices[143] (which took seven years to develop) but after eight years, no producers have yet participated. The other is for dairy digesters[144] which is one of many sources of financial support available that makes the projects affordable to farmers (see *Dairy Manure Management: Moving from Waste Problem to Climate Solution* section for more).

In addition to the dearth of agriculture project types available, most farmers other than the very largest do not participate because they lack the resources to deal with these additional constraints:

- **High transaction costs** for project development and verification.
- **Low carbon prices** do not come close to compensating farmers for the true costs of their new practices which are only affordable when supported by other sources of public and private funds, as in the case of dairy digesters.
- Carbon markets are blunt tools best suited to monocrops and single practices. **They cannot adequately incentivize multi-benefit projects** that address other environmental, justice, and public health concerns, like enhanced biodiversity, improved air, and water quality, and more.

[143] California Air Resources Board. *Rice cultivation projects.*
[144] California Air Resources Board. *Livestock projects.*

Need Funding for Climate Resilience as Well as Climate Mitigation

We heard from interviewees that the 2022 Scoping Plan Update's focus on carbon sequestration failed to consider how forests, farms, and other natural and working lands are critical for the state's resilience to greater weather extremes. One interviewee stated that we need to restore ecosystem functions in our forests and other natural and working lands. Another said that "sequestering carbon is not the only value," but the state, in the climate change policy space, is not doing enough to value the other components of natural and working lands. Our forests and watersheds are "going to get hammered by climate change" unless we act now, said another interviewee. All agreed that we need more of a focus on improved climate resilience for the state's natural and working lands, advancing mitigation efforts alongside adaptation and resilience.

New Funding Sources Needed

Our interviewees noted that it will be important to spend state investments wisely and strategically, and some noted concerns about state agency staffing levels hampering implementation as well as concerns that the lack of coherent regional plans for climate action on natural and working lands may also be a barrier to effective implementation. They suggested that we need to look at a diversity of funding sources in the future. Ideas included federal investments available in California, new fees, and a climate resources bond. They noted that no one source of funding would likely be adequate, nor can fees and a bond fully replace General Fund investment.

Philanthropic Funding Can Leverage Regional Opportunities

One example of the power of leveraging these resources was the combined efforts of four charitable organizations who collaborated in 2019 to fill a gap in funding needed to support a cohort of farmers of color in the Fresno area with their Climate Smart Agriculture grants projects. The funds totaling $100,000 were spent to hire staff to provide additional technical assistance as well as compost spreading equipment for a cohort of 16 farmers who received Healthy Soils Program grants and 23 who got SWEEP grants for on-farm water conservation. These low-resource farmers, primarily Hmong, Latino, and African-American, were supported by staff with the UC Small Farms Program in Fresno. The equipment is still being shared with a large community of farmers in the region, and the Small Farm Program found ongoing funding to support and expand their staff capacity.

Regional Investments Needed

We heard from many interviewees about a strong need to invest in regional natural and working lands project implementation and related resources (e.g., technical assistance providers and other local partners). Ultimately, implementation happens at the local level, and having adequate resources and strategic plans to support that implementation is critical. They raised concerns that the state has not done enough to support good regional climate plans that include natural and working land solutions and that many plans lack the resources for implementation.

RECOMMENDATIONS

Invest State and Federal Resources in Multi-Benefit Solutions

As state and federal policymakers look to further support agricultural solutions to the climate crisis, it will be important to focus on those efforts that improve overall climate resilience and provide multiple benefits. The 2023 and 2028 farm bills must ramp up resources across the country to improve farmer resilience to greater weather extremes, increase food chain supply resilience, and expand regional and local food markets. At the state level, as California grapples with whiplashing state budgets, the state must maintain its commitment to climate change solutions by allocating a minimum of $150 million annually in General Funds to the Climate Smart Agriculture programs to provide a baseline for the programs and maintain momentum.

Invest State and Federal Resources in Underserved Producers

It is also critical to provide resources for underserved producers, especially farmers of color, who experience discrimination in ways that historically and ongoingly obstruct participation in state and federal agriculture programs.[145] By focusing resources on those underserved producers, the state can reach a growing segment of California's agricultural economy and remove barriers to participation. Furthermore, the state's investment in climate-focused technical assistance and research will benefit all in agriculture by bringing the latest science forward in ways that further greater resilience for all.

Many climate-resilient farming techniques are practices that were developed by indigenous producers and farmers of color over many years in close relationship with land. Yet Tribal producers and farmers of color have been systematically dispossessed and excluded from land access and ownership. Policy that seeks to support a transition to climate-resilient management must also support these producers. Climate and agriculture incentive programs should include a minimum 40 percent set-aside for socially disadvantaged farmers and ranchers, including a 10 percent prioritization for Tribes.

Target Bond Investments in Food and Agriculture Systems, Resilience, Equity

For several years, the legislature has been debating bills to propose a climate change and natural resources bond for voter consideration on a ballot. These efforts stalled in 2021 and 2022 due to state budget surpluses that hit new heights and created little political appetite to advance bond measures. However, in this new environment of budget scarcity and great climate urgency, support for a climate bond is increasing among legislative leaders and the Governor. One bond measure proposal[146] by Assemblymember Lori Wilson (AB 408), supported by CalCAN and a diverse coalition, proposes $3.7 billion for infrastructure to build a climate-resilient and equitable food and agricultural system. This would include funding for climate smart, organic, and sustainable agriculture incentives; regional food infrastructure; healthy food access; and farmworker housing.

Michael Yang at UC Cooperative Extension in Fresno consults with Xiong Pao Her on his SWEEP grant project.

Invest Special Funds, Fees in Scaling Up Agricultural Climate Solutions

Several climate smart agriculture incentives programs received funding from the GGRF early in their implementation. However, over the years, GGRF has been increasingly allocated to sectors other than agriculture. One exception is the GGRF funding that is awarded to the Sustainable Agricultural Lands Conservation Program (SALC), which receives two percent of the fund annually and is a powerful tool for preventing the loss of agricultural land to urban development. For other climate and agriculture programs, given the many competing climate priorities for those funds, other sources of funding need to be found.

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[145] See more federal discrimination issues here: Bustillo, X. (2023, February 19). In 2022, Black farmers were persistently left behind from the USDA's loan system. NPR. And see National Sustainable Agriculture Coalition. (2017, December 18). Racial equity in the farm bill: Barriers for farmers of color. For more on California efforts to address racial discrimination in ag programs, see Nittle, N. (2019, May 6). Farmers of color may soon get more support in California. *Civil Eats*.

[146] For more information on AB 408, see the Food and Farm Resilience Coalition website.

Agricultural fertilizers and pesticides are both assessed mill fees at their point of sale. Legislation signed into law in 2012 (AB 2174, Alejo) allows for the fertilizer mill fee to support efforts to reduce GHG emissions in agriculture.[147] An increase in the fertilizer mill fee (currently $0.001 per dollar of fertilizer sales) could support research, technical assistance, and incentives to transition away from fossil fuel-based fertilizers. The legislature funded a study released in 2022 that examined the possibility of increasing the pesticide mill fee and recommended rate options, providing guidance for implementing this potential revenue source. For more details, see the section on *Reducing Farmer Dependence on Fossil Fuel–Based Pesticides and Fertilizers*.

Develop Private–Public Partnerships, Focus on Supply Chain Resilience and Regional Innovation

Private investment is likely also needed to support farmers in becoming climate resilient. While we have outlined our concerns about carbon offset markets (see sidebar) there are other opportunities in the private sector to provide resources for farmers without the negative trade-offs associated with offset credits. For example, the Organic Valley insetting program as described in the sidebar could be a model for others in the industry that want to reduce the carbon footprint of their supply chains, especially as more companies are required to report on their Scope 3 GHG emissions.[148] These private investments in agricultural supply chains can complement federal and state investments by providing needed capital for new equipment and other materials not covered through state and federal programs.

Organic Valley Climate Insetting Program

One alternative to carbon offset credits is being explored by Organic Valley, the dairy and livestock farmer cooperative based in La Farge, WI with farmer members across the country including in California. The cooperative aims to become carbon neutral by 2050. They have set out to be the first major dairy brand to reduce on-farm emissions without using carbon offsets, and instead are designing a carbon insetting program[149] which will reward its producer members directly for GHG emission reduction projects on their farms. Organic Valley is working with a third-party certification company to develop systems to track the emission reductions from pre-approved project types.

Organic Valley is currently piloting the program with the support of state and federal grants. Farmers in the pilot will receive a payment based on their emissions reductions. Organic Valley will offer some of its buyers the opportunity to participate in the insetting program by helping to pay for the costs of the on-farm projects and in return be able to demonstrate reduced GHG emissions as part of the buyers' Scope 3 emissions reporting.[150]

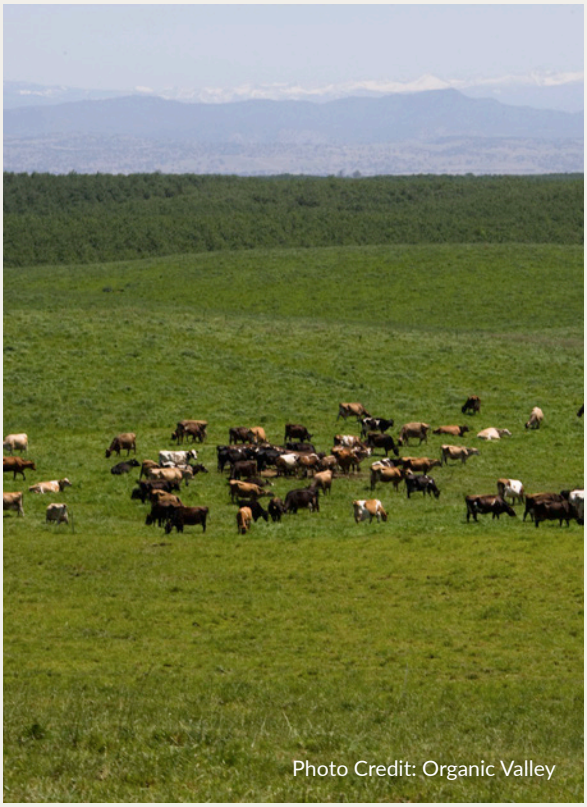

Photo Credit: Organic Valley

[147] AB 2174.

[148] U.S. EPA Scope 3 inventory guidance.

[149] Read more about Organic Valley's insetting program here: https://www.organicvalley.coop/blog/reducing-farm-emissions-without-carbon-offsets/

[150] For more on Scope 3 emissions reporting, see US EPA's summary and guidance documents: https://www.epa.gov/climateleadership/scope-3-inventory-guidance

Invest Philanthropic Funding in Regional Innovation, Equity

Private philanthropy can play an ongoing and important role in supporting innovation in climate resilience at the local and regional levels. There will always be necessary constraints on government spending but private funding can step in where the government cannot. It can support the coordination of resources, new projects, and pilots—all of which can inform potential new state or federal funding areas in the future. Private funding should look to reach underserved producers and advance equity in the transformation to climate-resilient agriculture. This will require partnering in new ways: with Tribes, farmworker organizations, underserved producers, and the technical service providers they work with.

Photo Credit: USDA photo by Lance Cheung