



California's new Natural Carbon Sequestration law: what it means for equity and climate

COP 27 Press Briefing

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Current global climate goals bold but inadequate

UN IPCC 1.5C Report- Oct 2018

- Cut emissions by 45% by 2030

AND

- remove up to 1000 Gt CO₂e from atmosphere

to achieve **net-zero emissions** by **2050** and **stay under the 1.5C** dangerous warming threshold agreed to in 2015 Paris accord



Current pledges= cuts GHGs <1% per year

<https://www.ipcc.ch/sr15/>

<https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>

<https://news.un.org/en/story/2022/04/1115452>

<https://news.un.org/en//story/2022/10/1129>

Western US now in global warming-induced severe megadrought; worst in 1200 years

- **Threatens dustbowl & crop loss by as early as 2027 in CA**
- Severe drought likely to until at least 2030; Reservoirs lowest on record;
- 2015 drought cost ~\$2.7 billion and 20k lost ag jobs in California



<https://www.motherjones.com/environment/2014/02/california-drought-matters-more-just-california/>

<https://www.cnn.com/2022/05/07/us/california-water-shasta-oroville-climate/index.html> (Shasta, Oroville)

<https://ramanathan.ucsd.edu/>

Williams et al *Nat. Clim. Chang.* (2022). <https://doi.org/10.1038/s41558-022-01290-z>

<https://www.latimes.com/environment/story/2022-02-14/western-megadrought-driest-in-1200-years>

<https://www.scientificamerican.com/article/drought-takes-2-7-billion-toll-on-california-agriculture/>

Increasing health impacts especially to most vulnerable communities

- **Heatwaves** leading climate related killer
- **Valley Fever** => infections surging in California



<https://aghealth.ucdavis.edu/news/research-highlight-occupational-risk-factors-valley-fever-californias-farmworkers>
<https://www.fractracker.org/2020/12/people-and-production/>
<https://www.epa.gov/climate-indicators/climate-change-indicators-heat-related-deaths>
<https://www.seas.harvard.edu/news/2021/02/deaths-fossil-fuel-emissions-higher-previously-thought>
<https://www.latimes.com/california/story/2021-02-01/wildfire-smoke-microbes-in-the-air>
<http://www.who.int/globalchange/en/>; Leleiveld et al., Cardiovascular, March 2020; Hoffman et al. Climate Jan 2020
Bekkar et al JAMA June 2020
<https://www.nytimes.com/2020/06/18/climate/climate-change-pregnancy-study.html>
<http://www.g-feed.com/2020/09/indirect-mortality-from-recent.html>

California: world's 5th largest economy & global climate leader



But California is behind:

Must accelerate state goals for equitable
GHG reductions and carbon removal

Not on track for 2030



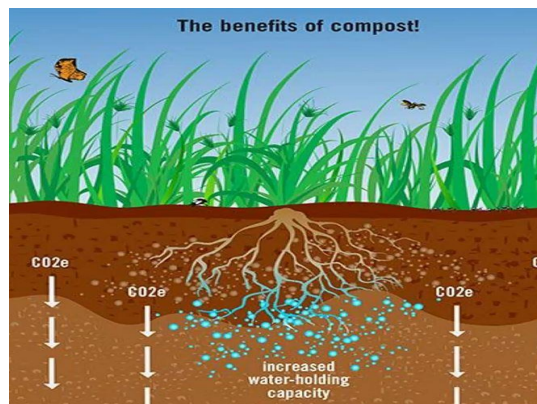
Scale up natural carbon sequestration *not technological carbon removal*



✗ Carbon Capture and Storage (CCS):
to remove CO₂ from power plants and industrial processes, placing the CO₂ into long-term storage



? Direct Air Capture (DAC):
extracts the CO₂ from the air by pulls air through filters where it reacts with chemicals and is stored or used



✓ Nature-based sequestration (NbS):
absorption of CO₂ in soil, trees, plants, wetlands, oceans

<https://theclimateconnection.org/carbon-capture-and-storage-pros-cons/>
<https://www.treehugger.com/carbon-capture-and-storage-ccs-pros-and-cons-5120005>

Scale-up Natural Carbon Removal

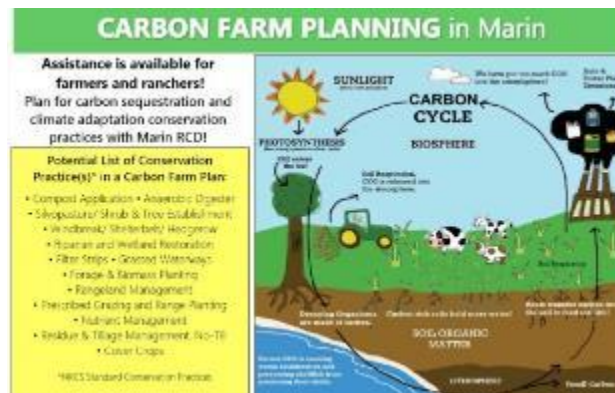
- Sequester addl. ~100+ MMT CO₂e annually on working lands alone
 - **Healthy Soils** (eg, compost application)
 - **Carbon farming** and gardening
 - **Climate-smart habitat restoration** and management on land/coast
 - **Enhance protected habitats**
 - **Engage Indigenous communities and TEK** (*traditional ecological knowledge*)



Carbon Farming, Marin

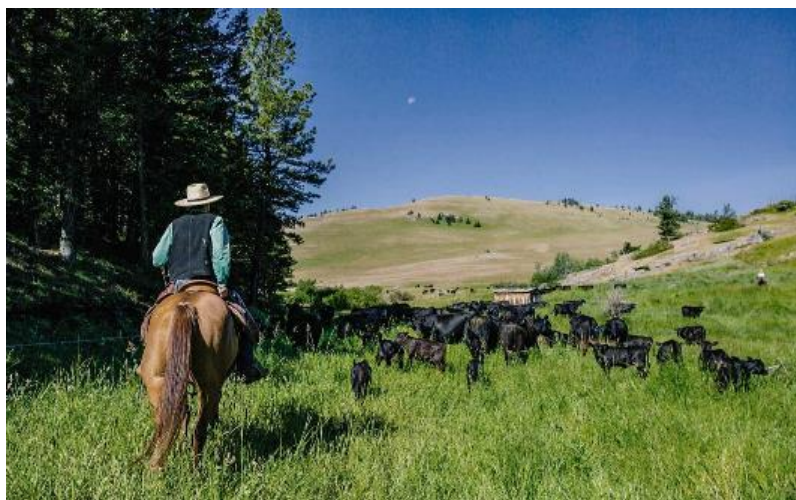


Kelp forests



<https://www.marincarbonproject.org/carbon-farming>
<https://www.carboncycle.org/carbon-farming/>
<https://www.pointblue.org/our-work/restoration/>

Benefits of scaling up soil carbon storage on California's working and urban lands



- ✓ Water and food security
- ✓ Drought, extreme heat, wildfire
- ✓ Cleaner air & water- esp. for frontline communities
- ✓ Food crops & resilience
- ✓ Biodiversity
- ✓ Jobs

www.theclimatecenter.org/working-lands

Natural Carbon Sequestration bill passed and signed into law (AB 1757, C. Garcia): Progress!

- Requires that state set ambitious goals for natural carbon sequestration for 2030, 2038 and 2045
- Establishes an advisory committee including Indigenous and Enviro Justice representatives



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