



Soil Carbon Sequestration Update

July 2021 - Soil Carbon Sequestration Update

Helpful Resources

FAO Global Soils Portal has carbon maps and databases that may be helpful to policy makers, researchers and producers.

<http://www.fao.org/soils-portal/data-hub/soil-maps-and-databases/harmonized-world-soil-database-v12/en/>

Regeneration Canada issued a map of farms in Canada using regenerative practices.

<https://regenerationcanada.org/en/>

Project Drawdown provides helpful facts about the role agriculture plays in advancing mitigation, adaptation and other co-benefits from building healthy soils.

<https://www.drawdown.org/solutions>

Agroecology Learning Alliance in Southeast Asia provides online and in person farmer workshops. <https://ali-sea.org/upcoming-workshops-trainings/>

Savanna Institute offers online courses on agroforestry fundamentals for land holdings of all sizes. <https://www.savannainstitute.org/online-course/>

HowGood provides provocative blogs, stories and supply chain examples of regenerative farming.

<http://blog.howgood.com/>

This December 2020 one hour webinar focuses on a toolset from the WOCAT Carbon Benefits project and Colorado State for measuring carbon while managing lands sustainably.

https://www.unccd.int/sites/default/files/inline-files/Invitation_World_Soil_Day_2020_Webinar%20Carbon%20Benefits.pdf

Through colourful maps and illustrations the Soil Atlas of Latin America explains in a simple and clear manner the diversity of soil across Central and South America and the Caribbean. <https://esdac.jrc.ec.europa.eu/content/soil-atlas-latin-america>

This article features the top twenty regenerative agriculture podcasts.
<https://pickstofit.com/top-20-regenerative-agriculture-podcasts-you-must-follow-in-2021/>

Check out this Regenerative Agriculture Guide for Small Farms
<https://www.regenerativeagriculturebook.com/>

In 2021, Carbon Cycle Institute is partnering with [Chico State University's Center for Regenerative Agriculture](#) and [California Polytechnic University's Center for Sustainability](#) to scale carbon farm planning education and training opportunities for students, farmers and ranchers, conservationists, and natural resource management agency staff.

Climate Impacts Threaten Farmers, Ranchers, and Food Supply

Climate change is battering the western USA.
<https://www.nytimes.com/2021/06/17/climate/wildfires-drought-climate-change-west-coast.html>

Climate change is disrupting food security globally.
<https://www.aljazeera.com/economy/2021/4/2/this-is-how-badly-climate-change-has-hurt-food-production>

Coffee growers in Latin America are threatened by climate change.
<https://www.iadb.org/en/improvinglives/most-unexpected-effect-climate-change>

Western U.S. drought threatens food supply
<https://understandingdeeppolitics.org/farmers-warn-that-the-megadrought-in-the-western-us-threatens-to-cause-devastating-crop-failures-in-2021/>

Warming ocean diminishes nutrient density of fish
<https://www.theguardian.com/environment/2021/jul/20/climate-crisis-threatens-access-to-nutrients-in-fish-study-finds>

1000 Year floods in China affect small and large farmers
<https://www.riverineherald.com.au/world/2021/07/21/4730457/thousand-year-floods-report-ed-in-china>

Erratic weather is changing the foods we eat

<https://foodtank.com/news/2021/05/our-changing-menu-launches-awareness-campaign-about-the-climate-crisis/>

Policy Developments

Many of the following articles and papers examine developments and final rules developed in the European Union's Common Agricultural Policy as they relate to climate. There are significant lessons here for the US and the 2023 Farm Bill.

This brief looks at whether the EU policy reforms in the Common Agricultural Policy will actually help with climate mitigation and adaptation. In this Q&A, Carbon Brief explains the potential role of the CAP in cutting emissions and what the newly agreed reforms entail.

What is the CAP and why is it being updated?

Why is the CAP important for cutting emissions in the EU?

How successful has the CAP been in tackling emissions so far?

What were the key climate-related battlegrounds in the CAP discussions?

What are the reforms that have been agreed upon?

How have climate experts and NGOs responded to the new CAP?

What is the UK planning as a replacement for the CAP?

<https://www.carbonbrief.org/qa-will-eu-common-agricultural-policy-reforms-help-tackle-climate-change>

The new CAP rules, which will take effect on 1 January 2023, include some new environmental measures, but critics say the final text is riddled with loopholes and is unlikely to bring significant change.

<https://www.politico.eu/article/greens-grumble-eu-farm-reform-common-agricultural-policy/>

<https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=58913>

Learn more about the details of the EU CAP (the equivalent of the US Farm Bill)

<https://www.carbonbrief.org/qa-will-eu-common-agricultural-policy-reforms-help-tackle-climate-change>

Last year, 3,600 scientists across Europe issued a statement calling for fundamental reforms in the CAP.

<https://www.idiv.de/en/cap-scientists-statement.html>

The €672.5 billion [Recovery and Resilience Facility](#) (RRF) is a once-in-a-generation E.U. opportunity for member states—not only to tackle the COVID health crisis but also to

pursue the transition to a low-carbon, resource-light economy, restore nature and biodiversity and create high social welfare and cohesion. To receive funding from the RRF, member states were required to submit their own National Recovery and Resilience Plans (NRRPs) to the European Commission. ZOE Institute, in cooperation with the New Economics Foundation, developed a [Recovery Index for Transformative Change](https://socialeurope.eu/a-future-fit-recovery) (RITC), to assess the adequacy of these plans to contribute to the necessary transformation of society.<https://socialeurope.eu/a-future-fit-recovery> This index may have relevance for other regions and recovery/infrastructure plans.

The Biden Administration releases its America the Beautiful Plan to restore land, forests and soils. It calls for conserving 30% of the nation's land and water by 2030.
<https://www.doi.gov/pressreleases/biden-harris-administration-outlines-america-beautiful-initiative> and
<https://insideclimatenews.org/news/07052021/america-the-beautiful-plan-debuts-the-biden-administrations-approach-to-conserving-the-environment-and-habitat/>

Will the American Jobs Plan (infrastructure bill) moving through the US Congress help advance regenerative agriculture? Many farm and environmental groups are pushing for increased funding for reforestation, land restoration and regenerative agriculture in the large infrastructure bill.
<https://www.eesi.org/articles/view/Infrastructure-Policy-and-Programs-Nature-Based-Solutions>
<https://www.agandfoodfunders.org/infrastructure-investment-in-climate-and-ag/>

What's in the Biden Administration's 2022 Budget proposal for agriculture?
<https://modernfarmer.com/2021/06/whats-in-bidens-2022-budget-proposal-for-agriculture/>

Access information on policy proposals to promote agroecology in the developing world
<https://glfx.globallandscapesforum.org/events/62489>

Scientific Analysis and Papers

This Purdue University paper suggests that large row crop farmers utilizing cover crops and no till practices can contribute to soil carbon sequestration, but modestly.
<https://ag.purdue.edu/commercialag/home/resource/2021/06/opportunities-and-challenges-associated-with-carbon-farming-for-u-s-row-crop-producers/>

Research is underway at the University of Northern Iowa to explore the potential of restoring prairies to sequester carbon.
<https://scholarworks.uni.edu/csbsresearchconf/2021/all/47/>

Asia's grasslands provide livelihoods for some of the region's poorest people. Widespread grassland degradation reduces the resilience and returns to herding livelihoods. Reversing degradation and conserving grasslands could not only improve herders' situation, but also make a huge contribution to mitigating climate change by sequestering carbon in soils.

<https://www.frontiersin.org/articles/10.3389/fenvs.2021.657608/full>

New Initiatives

Duke University has launched a two year program to advance regenerative grazing practices in North Carolina and the southeast region of the United States.

<https://bassconnections.duke.edu/project-teams/regenerative-grazing-mitigate-climate-change-2021-2022>

Nature-based solutions are often overshadowed by the decades-long focus on carbon capture and storage technologies. 500 NGOs from the USA and Canada have sent a letter urging their governments not to move forward with CCS and CCUS.

<http://priceofoil.org/2021/07/19/500-groups-letter-reject-carbon-capture-storage/>

Job Openings

Conservation Agriculture FT position in Virginia

<https://www.tjswcd.org/job-postings/>

Green Acres Agriculture Director

<https://recruiting.paylocity.com/recruiting/jobs/Details/645632/Greenacres-Farm-Sales-LLC/Agriculture-Director>

Research Director, Rodale Institute (Iowa Office)

<https://rodaleinstitute.org/employment/research-director-iowa/>

Iowa Program Manager, American Farmland Trust

<https://recruiting.paylocity.com/recruiting/jobs/Details/632695/American-Farmland-Trust/I-daho-Program-Manager>

Sustainable Agriculture Best Practices Manager, PepsiCo

<https://www.pepsicojobs.com/main/jobs/239588BR?codes=1-INDEED>

FAO seeks a consultant to review its agroecology programs.

<https://www.impactpool.org/jobs/710705>

Corporate Action for Regenerative Agriculture

Indigo Ag is making significant strides in supporting regenerative agriculture.

<https://www.indigoag.com/carbon>

The French Fashion House Chanel is investing in a fund to support regenerative agriculture and small scale farmers in developing nations.

<https://www.reuters.com/article/us-global-climate-adaptation-farming-trf-idUSKCN2DM14Y>

McCain Foods commits to regenerative agriculture for potato production

<https://www.potatopro.com/news/2021/mccain-foods-commits-regenerative-agricultural-practices-all-its-potatoes-2030>

Gerber Foods looks at the nutritional benefits and carbon sequestration potential of regenerative agriculture.

<https://www.foodnavigator-usa.com/Article/2021/07/15/Gerber-expands-sustainability-goals-to-test-potential-nutritional-benefits-of-regenerative-agriculture-further-reduce-carbon-emissions>

SCS Global Services is playing a lead role in verifying soil carbon for carbon offsets

<https://www.scsglobalservices.com/services/carbon-offset-verification>

Pure Strategies has issued a corporate self-assessment tool to help companies adopt nature-based solutions to climate and related planetary threats.

<https://purestrategies.com/news/2021-04-16-pure-strategies-launches-self-assessment-tool-to-help-companies-set-science-based-targets-for-nature>

Webinars, Conferences, and Podcasts

The COP26 in Glasgow will have a significant focus on nature-based solutions to climate change. <https://ukcop26.org/>

FAO webinar on policy pathways to pesticide free approaches to agroecological food production, July 21

<http://www.fao.org/agroecology/database/detail/en/c/1415434/>

Drought-resistant agroecological practices

<https://www.agroecology-europe.org/aeu-webinar-on-pathways-for-drought-resilient-agroecological-systems-held-on-21st-of-june-on-our-facebook-page/>

Conference on agroecology and climate change, Toronto

<https://waset.org/climate-change-and-agroecology-conference-in-july-2021-in-toronto>

The pre-summit preparation and discussions for the UN Food Summit offer a range of opportunities and archived discussions for engaging on soil carbon and healthy soil issues.

<https://www.un.org/en/food-systems-summit/action-tracks>

This early July webinar featured Vandana Shiva and other experts advancing agroecology.

<https://zoom.us/join/zoom/register/tJwlfuCrqDIuHN06VPIT6PLmiylHbBrPtRPI>

The Southern Family Farmers and Food Systems Conference features Will Harris

<http://farmandranchfreedom.org/sfffs-conference/2021-conference-speakers/>

The NC Cooperative Extension Service in Durham, North Carolina is offering a series of webinars on soil health

<https://durham.ces.ncsu.edu/2021/04/soil-health-monthly-workshop-series/>

The Soil Health Institute has a free conference August 11 and 12th featuring sessions on healthy soils and the business case for regenerative agriculture.

<https://soilhealthinstitute.org/2021-annual-meeting/>

The Regenerative Agriculture Podcast is hosted by John Kempf and features dozens of experts and producers working to enhance crop quality and profitability while restoring the soil. <http://regenerativeagriculturepodcast.com/2021>

This international conference in 2022 invites research papers on building soil health globally.

<https://waset.org/soil-health-in-agroecosystems-and-agricultural-soils-conference-in-december-2022-in-cairo>

The South Dakota Soil Health Coalition is sponsoring an early 2022 gathering on soil health <https://www.sdsoilhealthcoalition.org/event/2022-soil-health-conference/>

Connecting People and Soil - Eurosoil gathering in August (virtual event)

<https://eurosoil-congress.com/>

A Worrisome Issue - Warming Soils

As the planet warms, soils may release more carbon.

<https://news.ncsu.edu/2021/07/warming-ozone-harm-soybean-roots/>

and <https://advances.sciencemag.org/content/advances/7/21/eabd1343.full.pdf> and

<https://www.carbonbrief.org/climate-changes-impact-on-soil-moisture-could-push-land-past-tipping-point>

Media, News, and Opinions

African leader Million Belay urges Bill Gates to stop telling Africans what kind of agriculture they need.

<https://www.agroecology-europe.org/bill-gates-stop-telling-africans-what-kind-of-agriculture-africans-need-among-other-things-we-might-simply-not-agree-an-article-by-million-belay/>

Bill Gates is the largest private farmland owner in the USA. Gates blogs about loving fertilizer.

https://www.vox.com/recode/22528659/bill-gates-largest-farmland-owner-cascade-investments?utm_source=pocket-newtab and <https://www.gatesnotes.com/Development/Why-I-love-fertilizer>

Four Ways Indigenous and Community Lands can Sequester Carbon

<https://www.wri.org/insights/4-ways-indigenous-and-community-lands-can-reduce-emissions>

Is carbon the crop of the future? <https://phys.org/news/2021-06-carbon-crop-future.html>

New Zealand Carbon Farming (NZCF) has [quickly grown to be one of the country's biggest landowners](#), with more than 89,000 hectares either owned or leased. NZCF says it is the [biggest provider of carbon credits in Australasia](#) and the biggest participant in New Zealand's Emissions Trading Scheme.

<https://www.stuff.co.nz/environment/climate-news/125508000/carbon-farmers-bought-swaths-of-nz-promising-to-create-native-forests--but-researchers-doubt-it-will-work>

Agroforestry - an ancient practice with modern benefits

<https://www.resilience.org/stories/2021-05-10/agroforestry-an-ancient-practice-with-a-promising-future/>

Should seaweed farming be better regulated?

https://civileats.com/2021/07/20/kelp-at-the-crossroads-should-seaweed-farming-be-better-regulated/?utm_source=Verified+CE+list&utm_campaign=bae517a2d0-EMAIL_CAMPAIGN_7_3_2018_8_13_COPY_01&utm_medium=email&utm_term=0_aae5e4a315-bae517a2d0-294349037

First farmer in United States to sequester carbon for cash

<https://www.goodnewsnetwork.org/us-policy-to-feature-carbon-credits-from-regenerative-farming-practices/>

Minnesota farmers gaining cash for regenerative practices

<https://www.mprnews.org/story/2021/06/22/minn-farmers-cashing-in-on-the-carbon-bank>

Carbon sequestered on farmland can't be counted at the national level (Ireland)

<https://www.farmersjournal.ie/why-carbon-sequestered-in-farmland-can-t-be-accounted-for-at-national-level-625639>

Agribusiness in Brazil and major global agribusiness interests are primary drivers of Amazon deforestation. The Amazon is now releasing more carbon than it is absorbing in parts of the rainforest. In this case, agriculture is a major culprit.

<https://www.theenergymix.com/2021/07/18/amazon-deforestation-flips-carbon-balance-puts-10000-species-at-risk/> and

<https://www.theguardian.com/environment/2021/jul/14/amazon-rainforest-will-collapse-if-bolsonaro-remains-president>

This big picture piece from Australia looks at soils and the potential for carbon sequestration.

<https://www.sydney.edu.au/news-opinion/news/2021/07/02/soil-carbon-sequestration-and-the-fight-against-climate-change.html>

The UN Food Systems Summit could fail to address climate change or fundamental questions about the need to transform our food system.

<https://thehill.com/opinion/energy-environment/563721-un-food-summit-could-fail-to-address-climate-change-the-biggest> and

<https://www.resilience.org/stories/2021-05-19/failure-to-engage-civil-society-marginalized-in-un-food-summit/>

This piece by a soil scientist questions, provokes and points to reduction of nitrogen fertilizer as a key lever for reducing agriculture's impact on the climate.

<https://www.resilience.org/stories/2021-04-08/a-soil-scientists-perspective-carbon-farming-co2-certification-carbon-sequestration-in-soil/>

For more information, go to [our website!](#)

To help someone new join our listserv on Soil Carbon Sequestration [click here](#).

