

August 6, 2019

Healthy Soils to Cool The Planet

Presentation to Pocantico Gathering on the
Role of Cities



Betsy Taylor

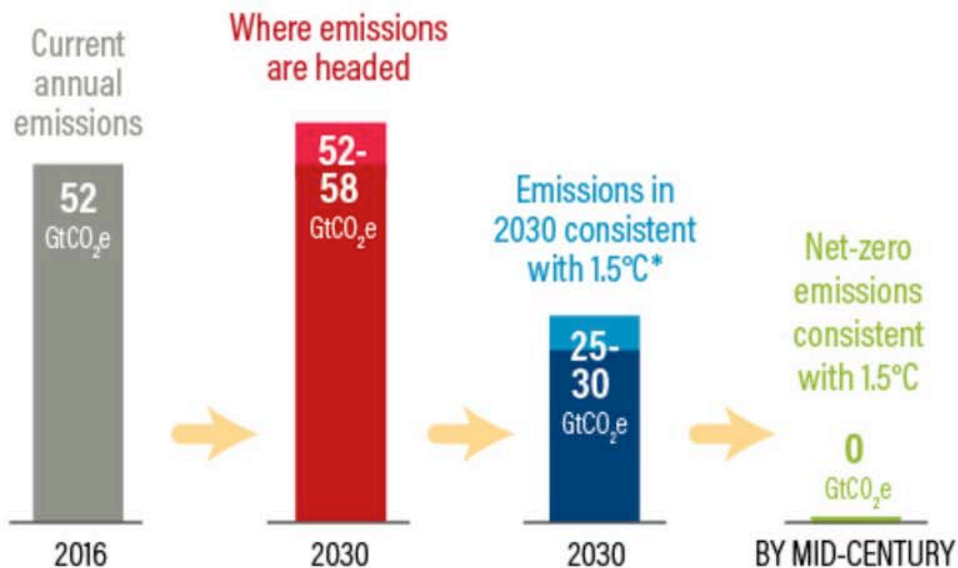
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The Science Is In

The World Is Not on Track to Limit Temperature Rise to 1.5°C



Notes: *on average, no or low overshoot.



WORLD RESOURCES INSTITUTE

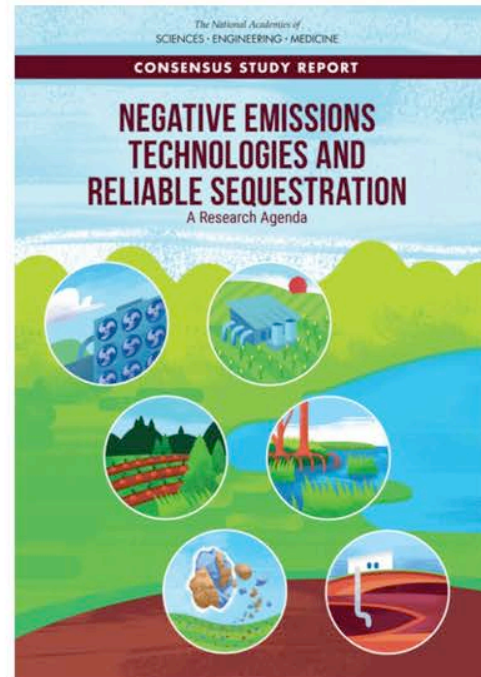
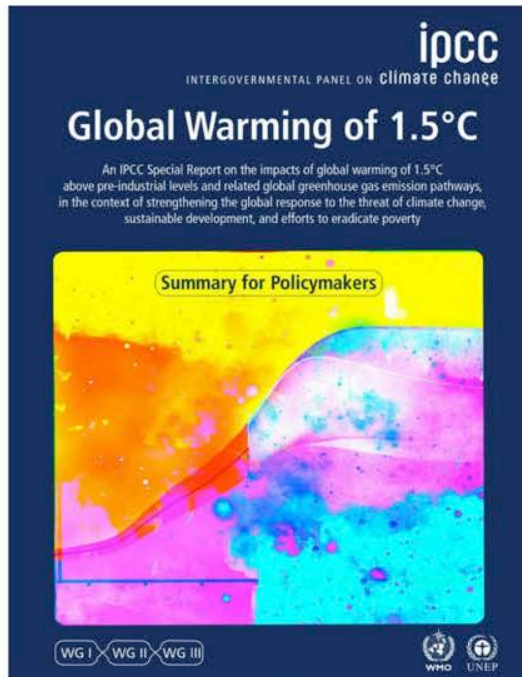
Carbon Removal is Essential



All pathways that limit global warming to 1.5°C assume carbon dioxide removal (CDR) on the order of 100–1000 Gigatons of CO₂ over the 21st century.



-IPCC 1.5 Report





What's The Carbon Drawdown Potential?

HOW MUCH CAN WE STORE?

Published estimates of soil carbon sequestration's mitigation potential vary from 1.5 to 15.6 billion tons of CO_{2eq}·Y⁻¹

Study	Annual Mitigation of Agriculture and Grazing Land in 2030 Gt CO _{2eq} ·Y ⁻¹	United Nations Environment Programme emissions gap estimate: 11–13.5 Gt CO_{2eq} in 2030
Paustian et al. 2016 Climate-Smart Soils	1.5–8.0	
Griscom et al. 2017 Natural Climate Solutions	4.4–6.9	
Hawken 2018 Drawdown	4.8–8.7	
Soussana et al. 2017 Matching Policy and Science	7.2–15.6	

These estimates vary based on divergent assumptions about the price of carbon, the agricultural practices incorporated into models, presumed scales of adoption, impact of warming soils, and other factors. New estimates are being published for some practices (agroforestry, organic waste management/compost, perennial crops) that will add to our understanding.

It's Not Just About Carbon



Climate Change Mitigation



Urban and Rural Jobs



Farmer Livelihoods



Soil Stability



Habitat Preservation



Stabilization of Human Migration



Food Security



Water Conservation

Soil Carbon Sequestration Through Agriculture - It's Moving!



“

What's surprising to me is that we've not done it sooner! This has the potential to make a huge difference.

”

-Dr. Pete Smith, a leading IPCC Soil Scientist and Professor, University of Aberdeen, Scotland



Healthy Soils to Cool The Planet

A Philanthropic Action Guide

View our Philanthropic Guide here:

<http://bit.ly/soilsguide>

Based on Over 100 Interviews and Surveys of Farmers, Scientists, Policy Leaders, and NGOs to Determine How Best to Scale the Field.

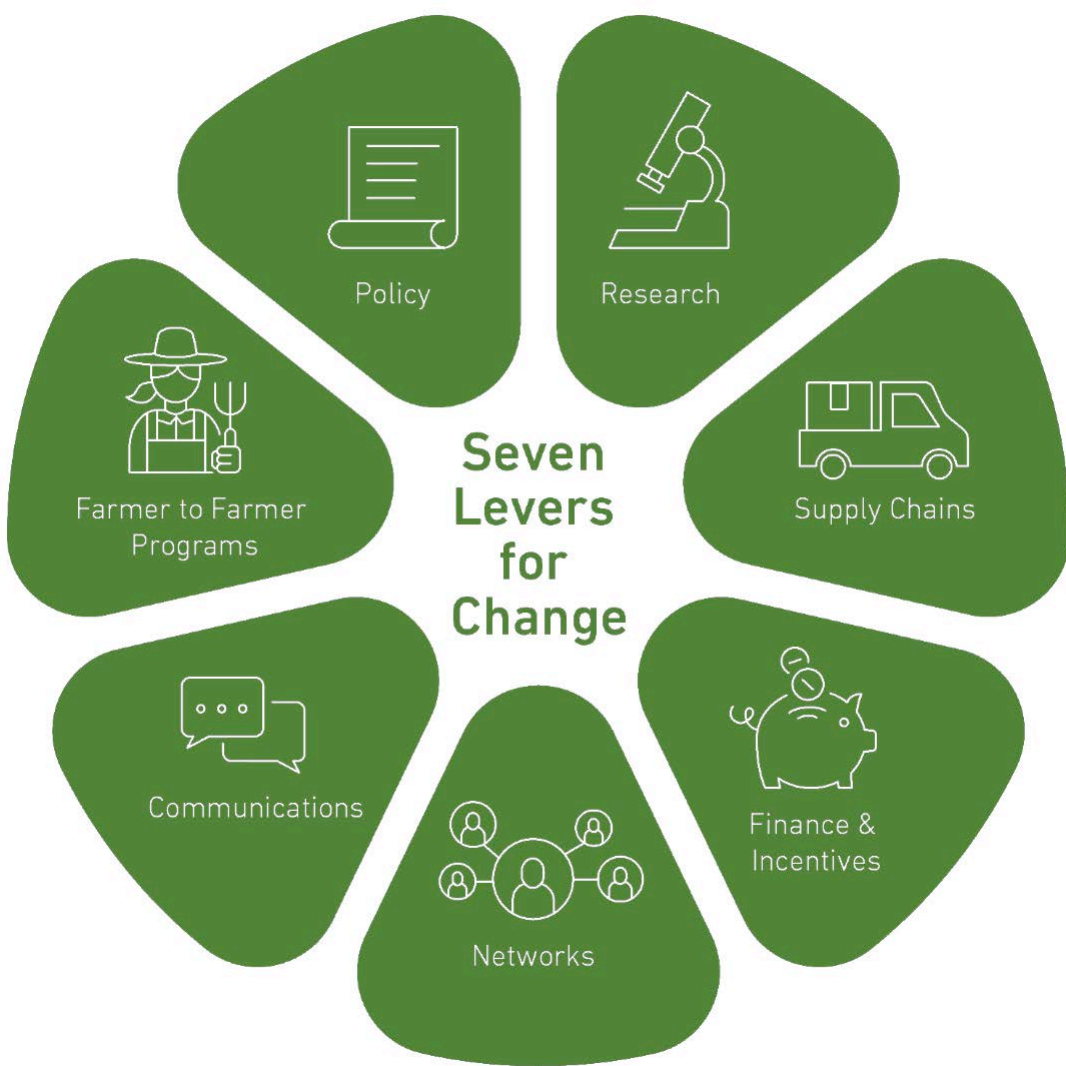


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Healthy Soils to Cool The Planet

A Philanthropic Action Guide





Change Lever One:

Farmer to Farmer Programs



Farmer
Networks



Technical
Assistance



Demonstration Farms
and Field Schools



Resource Conservation
Districts

Recent Momentum:





Change Lever Two: Policy



Soils and The 2020
Election



Green
New Deal



Municipal
Policies

Recent Momentum:



State Policy



Farm Bill



Change Level Three:

Outcome Oriented Research



Soil Mapping/Baseline
Data/Tracking
Results



Perennial and
Deep Rooted
Crops



Agroforestry



Compost

Recent Momentum:

IPCC Climate and Land
Report emphasizes need to
reduce food waste globally



Change Lever Four: Supply Chains



Consumer
Demand/Procurement



Local Foodshed/Circular
Economies



Ecosystem Service
Payments



Certification
Programs

Recent Momentum:

CENTER
FOR
GOOD FOOD PURCHASING
BUILDING A VALUES-BASED FOOD SYSTEM





Change Lever Five: Finance



Green Banks
and Bonds



Federal Programs
Change Subsidies



State and Regional
Incentives



Blended Finance

Recent Momentum:

Funders
for Regenerative
Agriculture



Ecosystem
Services Market
Consortium



Change Lever Six: Networks

No-till
On The Plains



SOIL HEALTH
INSTITUTE

BREAKTHROUGH
& STRATEGIES
SOLUTIONS



Savory

#NOREGRETS
Initiative



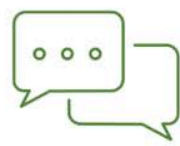
CNCA

USDN | urban sustainability
directors network

Recent
Momentum:

Green
America

4 PER
1000
SOILS FOR FOOD
SECURITY AND CLIMATE



Change Lever Seven: Communications



Transforming
Systems



The Potential



Stories of
Success



What Consumers
Can Do



What Cities
Can Do



What Citizens and
Voters Should Ask For

Recent Momentum:

KISS
- the -
GROUND

Game-Changing Opportunities



Waste to Compost



Geographic
Hotspots



Nature-Based Solutions/2020
Elections

Momentum:

San Francisco's mandatory composting and use of compost products for California farms and vineyards

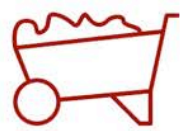


Funders for Regenerative Agriculture.

A 5 Year Initiative to Scale Regenerative Agriculture



For More Information Contact:
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Mulching



Greenways



Equity, Inclusion,
Engagement



Creative Financing
and Procurement



Composting- jobs, methane
reduction, soils for local gardens
and farms



Tree Planting



Concrete back
to Paradise-Urban
Land Reclamation



Coastal
Ecosystems



Grants



Impact Investments

Utilize All Assets and Capacities



Affirmation and Support



Mentor and Connect



Relationships and Convening Power



We Can Do This - But We Need Speed and Scale



We Need Each Other

