REGENERATION INTERNATIONAL

COOL THE PLANET. FEED THE WORLD.

Healthy Soils Can Cool the Planet

The Problem: The looming climate crisis and degenerated soils and landscapes threaten humanity's survival.
+ Degenerative agriculture and land use has led to the loss of 50-75 percent of cultivated soils' original carbon content[1].
+ More than half (52%) of the land used for agriculture is moderately or severely affected by soil degradation, while land degradation affects 1.5 billion people globally[2].
+ More than 75% of the world's conflicts occur in dryland areas, which are home to just 35% of the world's population[3].
+ Industrial food and farming are responsible for the majority of greenhouse gas (GHG) emissions – 44-57%[4].
+ Even if we had the political will to achieve zero emissions over the next few decades we would far surpass what scientists refer to as the point of no return—450 ppm of CO2 in the atmosphere[5].

The Solution: We have the opportunity to solve global warming by restoring healthy soils using tools we already possess.
+ There is more carbon in soil than in the atmosphere and all plant life combined; there are 2,500 billion tons of carbon in soil, compared with 800 billion tons in the atmosphere and 560 billion tons in trees and plants[6].
+ Carbon is the main component of soil organic matter (SOM). Healthy soils have high levels of SOM. The quantity of carbon contained in soils is directly related to the diversity and health of life in the soil[7].
+ With responsible management, healthy soils become net carbon sinks that contribute to the mitigation of: climate change through carbon sequestration and reduction of GHG emissions; and desertification processes[8,9,10].
+ Healthy soil provides resilience to extreme weather events, including drought and flood. With every 1% increase in soil carbon, soil can capture and store an additional 27,000 gallons of water per acre[11,12,13].
+ There is a very direct link between soil health and human health as 95% of the food we consume comes from soils. Healthy soil produces higher yields and more nutrient-dense food, helping to alleviate the global food crisis[14,15].
+ Healthy soils reduce/eliminate the need for synthetic amendments such as pesticides, herbicides, fungicides and fertilizers, improving human and environmental health[16,17].

Summary
+ If we transition to regenerative practices and work *with* nature, agriculture can become a major part of the solution to climate change instead of a net contributor. Regenerative agriculture, by building healthy soil, could restore CO2 levels to 350 ppm in under 5 years, if all 8.3 billion acres of grasslands and 3.8 billion acres of croplands on planet earth were converted to regenerative agriculture and land use practices[18]. *Restoring healthy soil and degraded landscapes is a viable, affordable, accessible, immediate solution to climate change.*

Healthy soil is gaining traction worldwide:
- **France 4 per 1000 Initiative :** On Dec 1, 2015, French Minister of Agriculture Stéphane Le Foll championed the signing of a visionary initiative, "4 per 1000: Soils for Food Security and Climate," to increase the level of organic carbon in each country's agricultural soils by 0.4% each year. So far, 26 countries and more than 50 organizations have formally signed on to the initiative.
- **California Healthy Soils Initiative[19]:** "As the leading agricultural state in the nation, it is important for California's soils to be sustainable and resilient to climate change. Increased carbon in soils is responsible for numerous benefits including increased water holding capacity, increased crop yields and decreased sediment erosion," said Governor Brown.
- **Soil is getting coverage:** Media outlets like the Washington Post[20], Upworthy[21] and Fusion.net[22] are jumping on the solution under our feet.

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