## Regenerative organic farmers have our destiny in their hands by cooling the Earth

Climate change paradigm shift from just carbon dioxide to include water will reverse global warming Regenerative organic farmers have the power and tools to reduce pollution and cool the Earth back to pre industrial levels, not just slow down global warming. They support nature and let her do the hard work of restoring balance and maintaining an even temperature, as she has been doing for millions of years.

## Old paradigm

It's only about carbon dioxide. Stop deforestation, plant trees and transition from fossil fuels to renewable energy. Achieving netzero carbon mission from these sources will only slow down global warming. The excess carbon dioxide in the air will take 1000 years to remove. Rebuilding the energy infrastructure and building thousands of industrial carbon sequestration plants around the world are very expensive and will take a long time. We do not have time to spare.

## **New paradigm**

According to Australian soil biologist and world renowned climatologist <u>Walter Jehne</u> and <u>Didi Pershouse</u>, the main controller of the earth's heat dynamics is water dynamics. For 8,000 years agriculture has been disrupting the <u>Soil Food Web</u> (<u>Elaine Engham</u>) thereby killing the living carbon soil sponge. Farming with conventional agriculture will continue releasing stored carbon and disrupting the <u>Water Cycle</u> and <u>Carbon Cycle</u>. Out of dozens of interacting mechanisms, these cycles are the primary mechanisms that regulate the climate.

40 years ago it was well established that carbon dioxide levels and global temperature increase together i.e. correlated, not necessarily one causing the other. It was easy to model carbon dioxide as the cause. Other causes were considered too complicated and not possible to be affected by human action.

Carbon dioxide is only responsible for about 1% of global warming and water is 95% of the cause. Currently 1% of the incident heat from the sun is trapped in the atmosphere, oceans and land. Reviving about 20% of degraded soil and maintaining plant cover will radiate this excess heat back out into space.

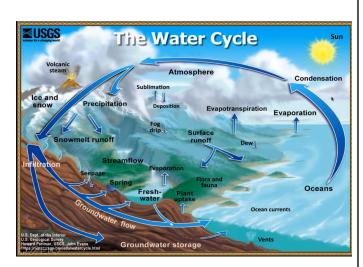
At the same time, we need to work towards mitigating the devastating effects of global warming and climate justice. The ultimate solution is to restore a healthy planet.

| Nothing other than regenerative agriculture climate-smart practices can: |                                   |  |
|--------------------------------------------------------------------------|-----------------------------------|--|
| Reduce greenhouse gas emissions faster                                   | sequester more carbon             |  |
| build healthy soils                                                      | restore the earth's heat dynamics |  |
| build nourishing food supplies faster                                    | reverse global warming            |  |

| Be more cost effective |  |
|------------------------|--|
|------------------------|--|

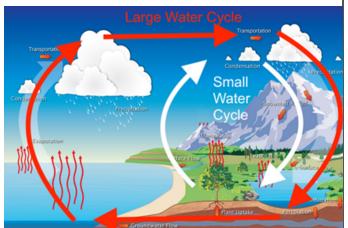
Life evolved a thriving balanced ecosystem with most of the land covered with plants. Green plants are necessary to maintain an even global average temperature. They help regulate the flow of heat around the earth and radiate all of the heat received from the sun back into space.

## **Water Cycle**



Large Water Cycle

Water evaporates from the ocean, falls as rain on the land then returns to the ocean.



Small Water Cycle
More rain is created when water evaporates
from plants and land, falls as rain, then
evaporates again. This cycle can repeat
multiple times.

Land covered with living plans or living roots year round 24 hours a day will cool the earth. During photosynthesis water vapor and bacteria are released, absorbing heat. When condensed into clouds, the heat is radiant back into space. Dead bare dirt absorbs heat which is trapped by the greenhouse gasses.

| Regenerative farming Practices | Advanced practices                                                                                                                      |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| use of cover crops             | integrating animals and crops                                                                                                           |
| minimal plowing and tilling    | introducing more trees and other perennial crops                                                                                        |
| rotating crops                 | silvopasture (the intentional combination of trees, forage plants, and livestock together as an integrated, intensively managed system) |

| biodiversity                                                                         | agroforestry (the restoration of trees and tree crops on farms).                                                                                                 |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| spreading compost (as well as super-compost "inoculants"),                           | adaptive multi-paddock (AMP) grazing, which uses high livestock densities for short durations between long periods for the land to rest and grow diverse grasses |
| moving away from synthetic fertilizers, pesticides, herbicides, and factory farming. |                                                                                                                                                                  |

We must give regenerative farmers all the support they need. Let's leave a livable world for our grandchildren and their grandchildren.

The Earth is warming much faster than currently thought. This is a clarion call that we must intensify our efforts to reverse climate change using all the tools available.

The recently <u>published study</u> by Stanford researchers <u>Noah S. Diffenbaugh</u> and <u>Elizabeth A. Barnes</u> used the very powerful artificial intelligence technique to analyze all of the historical data collected from the whole world. They predict that the critical threshold of 1.5° rise in temperature will be reached between 2033 and 2035 not 2050 employing all realistic mediation approaches. The role of agriculture is generally unknown.

For more scientific evidence and details see Regenerative Organic Agriculture Cools Earth, Moderates Weather Extremes and Reduces Pollution https://rb.gv/kggwwk

Regenerate Climate is a grassroots group of citizens, farmers, advocates, scientists, politicians and legislators. We are raising awareness and inspiring action on all solutions to the climate crisis, especially the mostly overlooked role of agriculture and regenerative farming.

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Some Regenerative Organic Agriculture Organizations: