

# FOUNDATION EARTH

*Rethinking society from the ground up!*

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## Our Holocene Our Garden: Getting back to 280 PPM?

By Randy Hayes, Executive Director Foundation Earth

The Holocene was a lovely time period- think the last 11,000 years or so. It brought us to a kindly 280 parts per million of certain gasses in our blue sky. It was a relatively warm interglacial period that enabled successful agriculture for the last 9,000 years. The Holocene equilibrium. Isn't that nice? But then we humans, employing some unwise inventions and technology, made a mess of our blue sky. Some say the billions and billions of us are ending the Holocene. They say the garden is going, going, gone and want to rename a new period the Anthropocene. Not so fast you epoch quitters!

It is true that many industrial age inventors and "leaders" over the last 200 years weren't thinking sharply enough. They weren't holistic, general systems theory thinkers. They didn't adjust to the unanticipated consequences of their glittery technologies. But now we know better. So, how do we get back to the garden? How do we get back to 280 PPM in the atmosphere? I miss the Holocene already.

It isn't so hard. Three things would help.

1. **Replacing Industrial Agriculture with Agroecology:**  
Shift to soil/carbon building ecological farming (agroecology).
2. **Doubling the Native Forest Canopy:**  
Halt deforestation & double the native forest canopy in less than 20 years.
3. **Switching to 100% Renewable Energy & Low-Impact Lifestyles:**  
Stop putting bad stuff up there. Stop turning the blue sky into a toxic furnace.

Agriculture is not our only tool, but it is a powerful piece of the toolbox. We can start here. Our atmospheric greenhouse gas history and future is roughly:

1750	280 ppm	CO2 in atmosphere before we started burning coal, oil, gas
1957	315 ppm	200 years heading the wrong direction
1998	360 ppm	We are in big trouble, feeding frenzy has occurred
2013	400 ppm	This is scary – a planetary emergency
2065	500 ppm	Us in about 50 years, if we stay stupid (lacking holistic thinking). Hello Venus temp's.

Some simple math: 400 ppm minus 280 equals 120. We need to remove 120 ppm to get back to the Holocene levels of 280 ppm that allowed us to flourish. Assuming that scrubbing 50 ppm of carbon dioxide is about removing 106 gigatons (Gt) of carbon then ditching 120 ppm is removing about 254.4 Gt from our blue sky.

**BAD NEWS:** We are tragically still going in the wrong direction. [Scientists at the Potsdam Institute conclude](#) that if we are to stay just below 2C of warming (a dangerous level) then only 565 more gigatons of carbon dioxide can be emitted by 2050.

**GOOD NEWS:** Fortunately, plants have remarkable properties for pulling carbon out of the air. About fifteen percent of all atmospheric CO<sub>2</sub> is processed by photosynthesis annually. Go green! How might it work to get back to 280 ppm?

**The Agricultural Answer:** Planet-wide we have 8.3 billion acres of grasslands and 3.8 billion acres of croplands. Some thoughtful people say that ecological grasslands management could scrub over 21 Gt out of our blue sky and croplands management could remove another 2 Gt each year. With a magic wand that would let us do everything carbon-sensible overnight, we could remove 11.21 ppm each year (rounding off). At 11.21 ppm per year, we could get back from 400 ppm to 280 ppm in about 10.7 years. **Voila!** So without a magic wand we might need 20 or 30 years? Still a short period.

**The Forest Canopy Answer:** Point #2 above, doubling our native forest canopy gives us an even stronger chance to get to 280 as doubling trees would scrub additional ppm. Doubling would also provide habitat and help buffer more pristine forests. Doubling has the added benefit of helping stop the extinction crisis. We are researching the ppm numbers. Would doubling reduce ppm as much as a switch to ecological farming? Would it be more?

In conclusion, there are still solutions to pursue, but not forever. Point #3 above, this is a *first do no harm* position. Stop contributing to the bad. Quit putting those Holocene garden killing pollutants into our blue sky. Quit closing the window of opportunity. We can't afford slow solutions to fast problems.

The soon to be nine billion of us need to rapidly switch to renewable energy and low impact lifestyles. Additionally, I suggest we humanistically get back to three billion of us and reassess. That won't be too easy, but hey – we aren't abandoning the Holocene like some. To me, Anthropocene advocates are quitters. To hell with them! The Holocene equilibrium is a lovely time period. It is our friend.