to shape the destiny of other planets. That's going to require a New Paradigm of economic, scientific, and cultural collaboration for which 8 billion people is not enough. We need more people. We need to create more creative geniuses.

That is a beautiful mission assignment. Progress; grow; discover. That's the task I give to all of you in this room, all of you watching. And for that, I'd ask you to consider that we may just need 3 trillion people. Thank you.

William Happer CO₂: The Stuff of Life

This is an edited transcript of the presentation of William Happer, delivered via pre-recorded video to Panel 2 of the Schiller Institute's Oct. 15, 2022 Youth Conference, "Build the New Paradigm: Defeat Green Fascism." Dr. Happer is the Cyrus Fogg Brackett Professor of Physics emeritus at Princeton University. The title has been added.

The video of this presentation is available <u>here</u>.



Schiller Institute

Dr. William Happer

I'm Will Happer. I'm a physicist: I taught for many years at Princeton, and before that at Columbia. I've also spent some time in Washington, so I've had a varied career.

What I want to say, now, is just a few words about carbon dioxide (CO₂), which is at the center of many really stupid policies that are being espoused by governments around the world, especially in the West and Europe, and in the United States.

Carbon dioxide is not a pollutant at all! It's actually a benefit, and it's really the stuff of life. We wouldn't exist without CO₂. By the standards of geological history, CO₂ levels now are much *lower* than they ought to be, and plants are struggling, actually, to grow. They grow much better if you double or triple the amount of CO₂ in the air. Commercial greenhouse operators routinely double or triple the amount of CO₂ in the greenhouse, because even though you have to pay for the CO₂—it's not cheap—you get such better products from your plants, better flowers, better fruits, that it's worth the extra expense from the CO₂.

You can see that happening on a large scale, from satellites. If you look down at the Earth, it's clear the Earth is getting slowly greener over the past 50 years, and if you analyze that, it's not because there's more

rainfall or more fertilizer, it's because there's more CO_2 . So, there's nothing but good news from increasing levels of CO_2 in the atmosphere.

Now, CO₂ is a greenhouse gas, and it does affect the climate, but not very much. If you were to double CO₂ levels, and that would take a long time—over a century, at the rates of increase that we're seeing today—you would only decrease the radiation to space that is controlled by CO₂, by 1%. So this 100% increase in CO₂, which will be hard to

attain, only makes a 1% difference in the cooling radiation to space, and that can easily be made up by a very small warming of the Earth: The Earth's surface would have to warm by about 1° Centigrade. The exact number nobody really knows for sure; it depends on various feedbacks. But I would be very surprised, and most other knowledgeable people very surprised, if it exceeds about 1° Centigrade.

We're Made of Carbon

The most generous thing I can say about people who go around talking about "carbon pollution" and "carbon footprint," and this sort of thing, is that they have a very poor education in science. If they knew more about science, they wouldn't say that. And this, unfortunately, includes a lot of scientists, who like to pontificate on things that they don't really understand. It's a disease that goes with being in academia.

We're made of carbon. Human beings are bags of protein and fat, and other materials that are all based on carbon. The amino acids that are the building stones of our proteins have a carbon atom in the center and lots of carbon surrounding them and the other parts of the molecule. The sugars and the fats that provide energy

for us are all based on carbon, and so, we use a lot of carbon. And we breathe out large amounts of carbon with every breath. In fact, the average human breathes out about 2 lbs. of CO₂ per day.

I want you to think about this. We're basically carbon living creatures, all living creatures. And we produce a lot of CO₂ simply by living: Two pounds a day per human. There are 8 billion humans, so that's quite a lot of carbon, isn't it, per day?

If you're going to get rid of "carbon pollution," does that mean we ought to get rid of humans? This is not a rhetorical question: It's something worth serious consideration, because some of the most rabid proponents of fighting climate change also think you need to get rid of most humans. I don't agree with that, and you ought to think about it, too, because it could affect you in the future.

'Burning Witches To Stop Climate Change'

Everyone knows that the climate always changes. The geological record makes that clear. Even in the historical record we know very well that there was a massive climate change at the end of the Roman Empire. It was one of the contributors that caused the mass

migrations that were such a problem for the Roman Empire. There have been many other changes in the climate like that.

Definitely, climate changes. I don't see evidence that humans have had very much to do with it, or will have very much to do with it in the future. I already mentioned that the main greenhouse gas that we're concerned about, CO₂, is heavily saturated, so doubling the amount of it would only cause a 1% change in radiative forcing—to use a technical term.

The idea that we have to spend trillions of dollars decarbonizing the Earth, when CO₂ is definitely good for the Earth, good for life on Earth, is just insane. It's like burning witches to stop climate change—which we used to do, by the way. When we did that, the leadership was always the most educated people. In the Salem witch trials, all the judges had Harvard degrees. The common people were a little less certain that the witches had anything to do with the bad climate, but there was no doubt in the minds of Harvard judges that they did.

Thank you very much. I wish you all well at this meeting: It's an important meeting, so learn as much as you can.

New EIR Offprint Special Report Now Available

The Great Leap Backward: LaRouche Exposes the Green New Deal

Executive Intelligence Review has released this Special Report to warn of the extreme danger to mankind represented by the Green New Deal, also called "The Great Reset" by the leaders of the Davos World Economic Forum.

Already being implemented, this plan is taking over the direction of national economies from sovereign governments, using the power of central banks and the too-big-to-fail private financial institutions, cutting off credit to fossil fuel power generation and to industrial and agricultural enterprises claimed to emit too much carbon. Meanwhile it is creating a new huge bubble in the "sustainable fuel" sector, hoping to prop up the increasingly bankrupt financial system.

Stopping it by returning to a Hamiltonian American System credit policy, requires an understanding which is the purpose of this report.



EIR subscribers who have received this Special Report as their 68-page Feb. 12 issue: Get an Offprint edition for someone you know who should have it!

Special Report is available in soft cover printed copy for \$30 plus shipping, or as a PDF for \$20 (requires e-mail address).

https://store.larouchepub.com/product-p/eirsp-2021-1-0-0.htm