CO_2 emissions from 2020 to 2050 on a linear scale to zero, the accumulated emissions [reduced] over the period of 30 years (10,950 days) would be around 770 million tons. The three dominating CO_2 polluters: China, the USA, and India produce this amount of CO_2 within 16 days!

A convincing policy to reduce CO_2 emissions can only work under a binding international agreement, which will have to be different from the loose Paris treaty. The scientific field of climate is anything but in agreement about the triggering factors with regard to climate change. It may be that CO_2 is one of them, but definitely not the only one. A possible other factor of importance is that mankind may need to learn and get used to a more careful handling of the limited resources of oil, gas and coal.

The Consequences of 'Net Zero'

A further question needs to be raised with regard to what the claim of net zero CO_2 could mean. According to the current valid energy policy in Switzerland, all of the five nuclear power plants must be taken out of operation by 2035. The missing power production is to be substituted by means of photovoltaic (PV) technology. Unfortunately, the need for construction material rises with the decrease of power concentration. Consequently, the accountable energy input for the construction of photovoltaic plants and the subsystems needed increases drastically and thus the accountable CO_2 emissions as well. "Gray Energy" is the term used. According to my calculations, the substitution of photovoltaic for nuclear production, including the [then-required] mandatory sub-systems, as for instance hydro storage, means the yearly accountable CO_2 emissions will increase by 8.7 million tons, which means about 20% of the current Swiss CO_2 emissions.

This leads to the question, "By what means could the use of energy from fossil fuels realistically be replaced?" As said, not only in Switzerland, the prime option of current policy is photovoltaic. If Switzerland would go for 100% decarbonization—meaning to discontinue the use of fossil fuels—one would need to invest in about 220 GW of nominal photovoltaic power—about 20 times the current electric power generation capacity installed. This figure includes also the replacement of current nuclear power plants as well as to compensate for the power losses in the tremendous hydro-storage capacity needed. It would be difficult to place this capacity in Switzerland which is already "saturated" with hydro plants.

Furthermore, time is getting short to implement all this by 2050. Consequently, there is only one realistic solution to ensure a cost-efficient power supply system in the future: Nuclear power installations, according to latest state of the art.

It will be a task for all of us, to guide European energy politics back to a reasonable track. Thank you for listening.

Prof. Augustinus Berkhout

The Good News About CO_2

Professor Augustinus "Guus" Berkhout is President of the Climate Intelligence Group (CLINTEL), and a Senior Member of the Dutch Academy of Engineering (AcTI). This is an edited transcript of remarks he delivered to the second panel, "The Real Science Behind Climate Change: Why the World Needs Many More Terawatts of Energy" of the June 26-27, 2021 Schiller Institute conference, "For the Common Good of All People, Not Rules Benefiting the Few!" Subheads have been added.

Schiller Institute

Prof. Augustinus Berkhout

My name is Guus Berkhout. I am Professor Emeritus of Geophysics at the Technical University of Delft. I'm one of the co-founders of the international CLINTEL (Climate Intelligence) Group, now consisting of almost 1,000 scientists. CLINTEL has recently written a letter to EU Vice President Frans Timmermans about the many

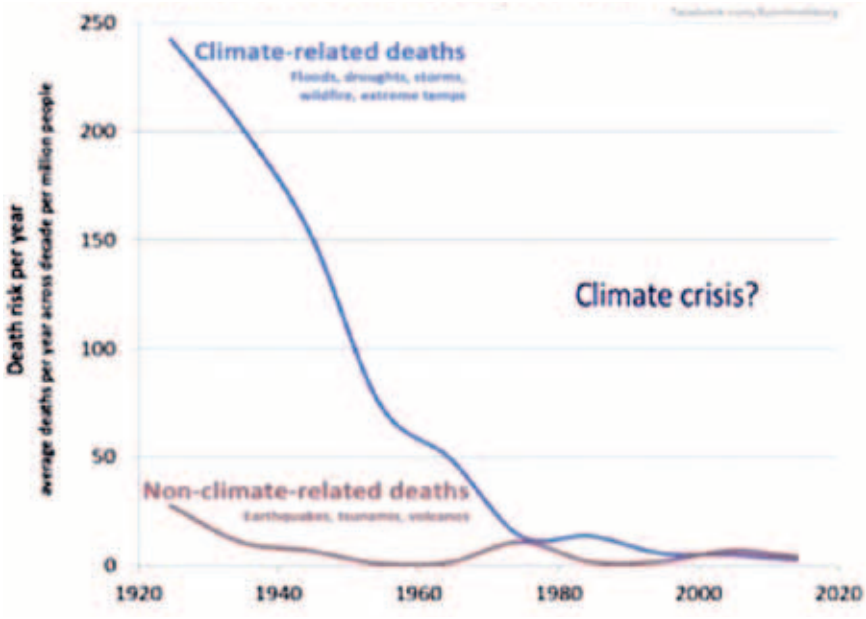
incorrect assumptions and conclusions in European climate policy. CLINTEL received the following response:

> We are already seeing the effects of climate change across Europe. Prolonged droughts and declining harvests, extreme heat waves, increasing diseases among livestock and crops. 400,000 deaths a year from air pollution, and more.

What an embarrassing answer! Why scam people with lies and deceit? Hard facts demonstrate that the real world is entirely different.

Let me show you the first factual graph, **Figure 1**, "Global Death Risk from Climate and non-Climate Catastrophes, 1920-2018." You see a spectacular drop in the number of victims due to weather extremes such as floods, droughts, hurricanes, forest fires, etc. A century ago, when there were only two billion people, weather disasters killed an average of about 500,000 people a year. Last year, despite an increase in the world's population to 7.6 billion, that number has dropped to an estimated 8,200 victims.

FIGURE 1
Global Death Risk from Climate and Non-Climate Catastrophes, 1920-2018



Centre for Research on the Epidemiology of Disasters, Catholic University of Louvain

So, a decrease of over 98%, and measured per million people, as much as 99%. This is impressive. Indeed, this is already a major achievement. But in the future, we can do even better. A further decrease of victims will be realized by increases in education, technological development, and wealth. The more knowledgeable and prosperous countries become, the better they can protect themselves from weather extremes.

[Professor Berkhout showed a second factual graph, "Global Weather Disasters as a Percentage of Global GDP", not republished here, but viewable at the Schiller Institute conference page —ed.]

You see the global cost due to weather disasters as a percentage of GDP. Again, it shows a remarkable outcome. Even more so because the elites of the New Green Deal do tell us that the costs of climate disasters are *increasing*. However, in reality, the cost as a percentage of the global economy has *not* been rising, but it is *falling*.

This happened at a time when CO_2 emissions were rising faster than ever, despite the 25 international climate conferences to try to reduce them! Does it not show the absurdity of this climate circus?

Let me also show you the embarrassing agreement of the G7 at the Carbis Bay Summit last week. As you see, their aim is net zero CO_2 emission in 2050:

> **G7 Agreement at the Carbis Bay Summit**
>
> Protect our planet by supporting a green revolution that creates jobs, cuts emissions, and seeks to limit the rise in global temperatures to 1.5 degrees.
>
> We commit to net zero no later than 2050, halving our collective emissions over the two decades to 2030, increasing and improving climate finance to 2025, and to conserve or protect at least 30% of our land and oceans by 2030.
>
> We acknowledge our duty to safeguard the planet for future generations.

I ask you, is this G7 plan a sign of stupidity? Or is it the sign of evilness? Ladies and gentlemen, in conclusion, the factual graphs I showed demonstrate that

there is no climate crisis at all.

The latter has become the slogan of CLINTEL: "There is no Climate Emergency." But, ladies and gentlemen, there is *more* good news. In the next reality figures, I show you that more CO_2 is even a *blessing* to nature and mankind.

Food supply has increased by more than 30% since 1960. In **Figure 2** "Grain Yields in the Past 50 Years," you see that the grain yields have been tripled. You also see that the U.S.A. and China are doing very well. But this big achievement is also true for the entire world. So, the miserable Malthusian pictures of the past are replaced by a very positive outlook.

Looking at all those positive developments, my question is, where is the climate crisis?

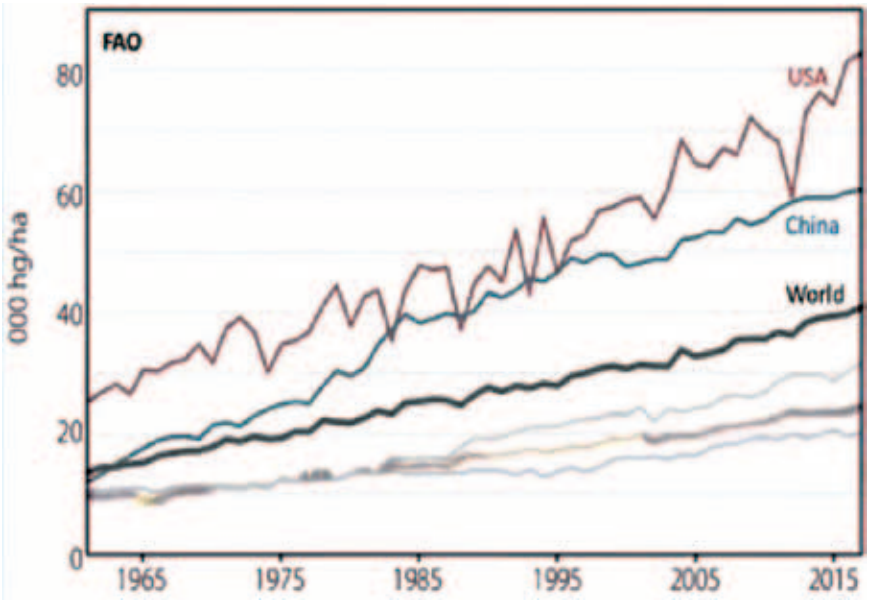
Finally, I will show you even *more* good news. We see already for decades that more CO_2 in the atmosphere is greening the Earth, both being a global phenomenon.

Look at **Figure 3**, an interesting picture. That the Earth is greening, is not a surprise. Many experiments have shown over and over again that more CO_2 favors plant growth. Dutch greenhouses are being fed with a surplus of industrial CO_2 in order to increase their bio-productivity.

Is it not a sign of pure wickedness to charge fees and taxes on CO_2-generating activities, while this CO_2 is a blessing to nature and mankind?

FIGURE 2

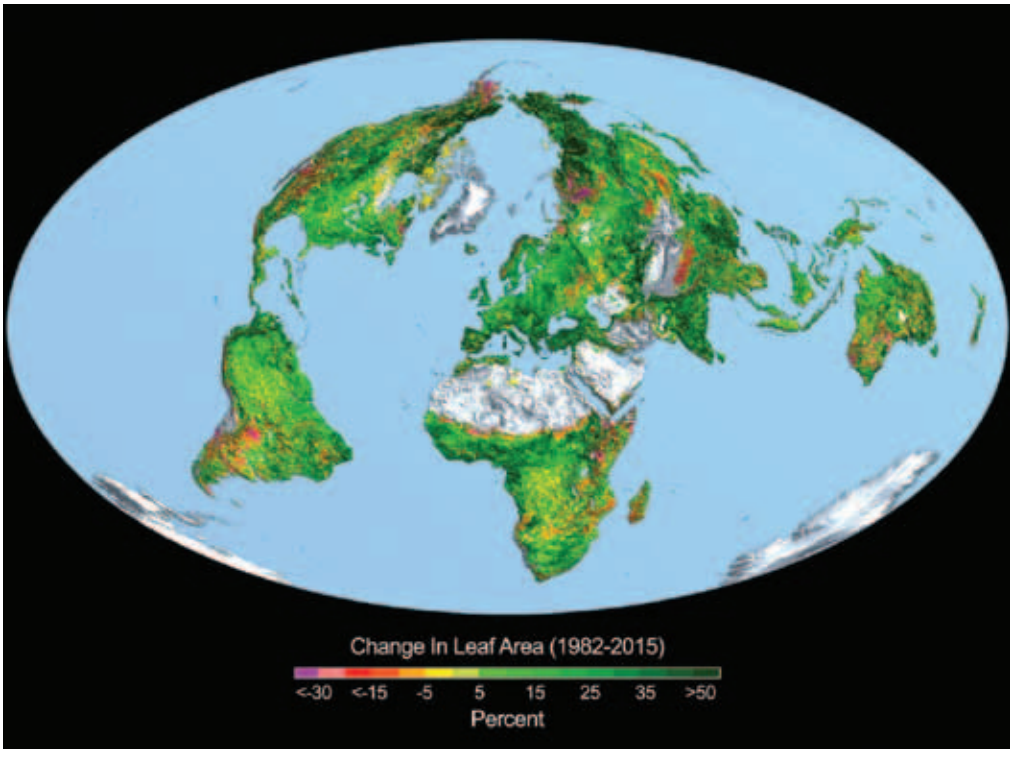
Grain Yields in the Past 50 Years



United Nations Food and Agriculture Organization

FIGURE 3

Change in Leaf Area, 1982-2015



NASA: from Boston University/R. Myneni