

Climate note #1: “The push for zero”

Thomas Lord *February 4, 2019, Berkeley, CA*

Climate change is a complex problem, with many aspects. It is hard to wrap one’s head around. Anyone who tells you they understand the problem thoroughly, is almost certainly not correct.

To tame this complexity, scientists sometimes look for simple facts that characterize the big picture. One example is this:

If humans are to avoid a massive die-off - and even steer well clear of possible human extinction - then within a single single human lifetime, net global carbon emissions from human activity must reach 0, and then go below 0.

Within a very few decades, at most, we must not only stop adding greenhouse gasses the atmosphere - we must be removing large amounts of them every year. At present, we continue to increase the amount of greenhouse gas we emit each year. We have no ready-made plans to fix this. There is no known political plan for fixing this.

There is, among scientists no substantial controversy at all about these statements. The IPCC’s¹ extensive surveys of climate change science assign “high confidence” to statements of this sort. It is the scientific consensus, as best we know it.

Already, this is inherently mind-blowing. Human emissions have been steeply on the rise since the 1830s, when coal-fueled steam power began to displace water power as the energy source for industrial production. Today, the rate of carbon emissions continues to grow with every dollar of economic growth. We are a society that thrives by consuming ever greater amounts of power, and have no systems that produce that power in adequate quantities without adding to carbon emissions. Nevertheless, scientists are telling us well within a single human lifetime, we must collectively reach 0 emissions. In fact, we must go below 0.

About this series

This is the first in a series of very short discussions of climate change, meant to be easily understood by a wide audience.

Please let me know if you spot errors, or have suggestions or questions. I will do my best to improve the notes and to issue corrections as necessary. I can be

¹The *Intergovernmental Panel on Climate Change* convened by the United Nations. Their most recent report (SR-15) discusses the increases in mass mortality we will see with only an additional .5°C increase in global warming - as well as how much worse it will be an increase of 1°C from current conditions.

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Planned topics

The *tentative* plan for this series of notes is:

- **Climate note #1: “The push for zero”**
The *gravity* of the situation.
- **Climate note #2: “The carbon budget”**
The *scarcity* of resources to solve the problem.
- **Climate note #3: “How soon until zero?”**
The *urgency* of successful action.
- **Climate note #4: “Mass die-offs? Extinction? Really?!?”**
The *importance* of acting.
- **Climate note #5: “Your lifestyle or your life - physical and economic limits”**
The *sacrifice* required (no sugar-coating).
- **Climate note #6: “Can’t we just make our infrastructure green?”**
The *denialism* popularized by progressive politics.
- **Climate note #7: “What is to be done?”**
How to act wisely, together, in *solidarity*.
- **Climate note #8: “The genocide problem.”**
Are we *monsters*?
- **Climate note #9: “Simple plans of action.”**
A little *courage* is all we need to act.
- **Climate note #10: “Rejoice.”**
A personal reflection.