

Adapt or Die! – Hyperbolic? Perhaps

However, warming is now parabolic and accelerating – we must prepare

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March 18, 2026

It's been a fascinating five months since I joined the [Earth Knowledge](#) (EK) Science Advisory Council, led by [Don Wuebbles](#), who I first met when we both helped assemble America's 3rd National Climate Assessment ([NCA2014](#)). In the years following our assessment there have been continuing annual gatherings among scientists and policymakers, e.g., the Paris Accords (2015), etc. However, as shown below in **Figure 1**, there has been no meaningful change in the accelerating trajectory of GHG emissions over the past 20 years. The quadratic fit to the emissions curve is essentially identical to when I first fit such a curve to the observations, back in 2008.

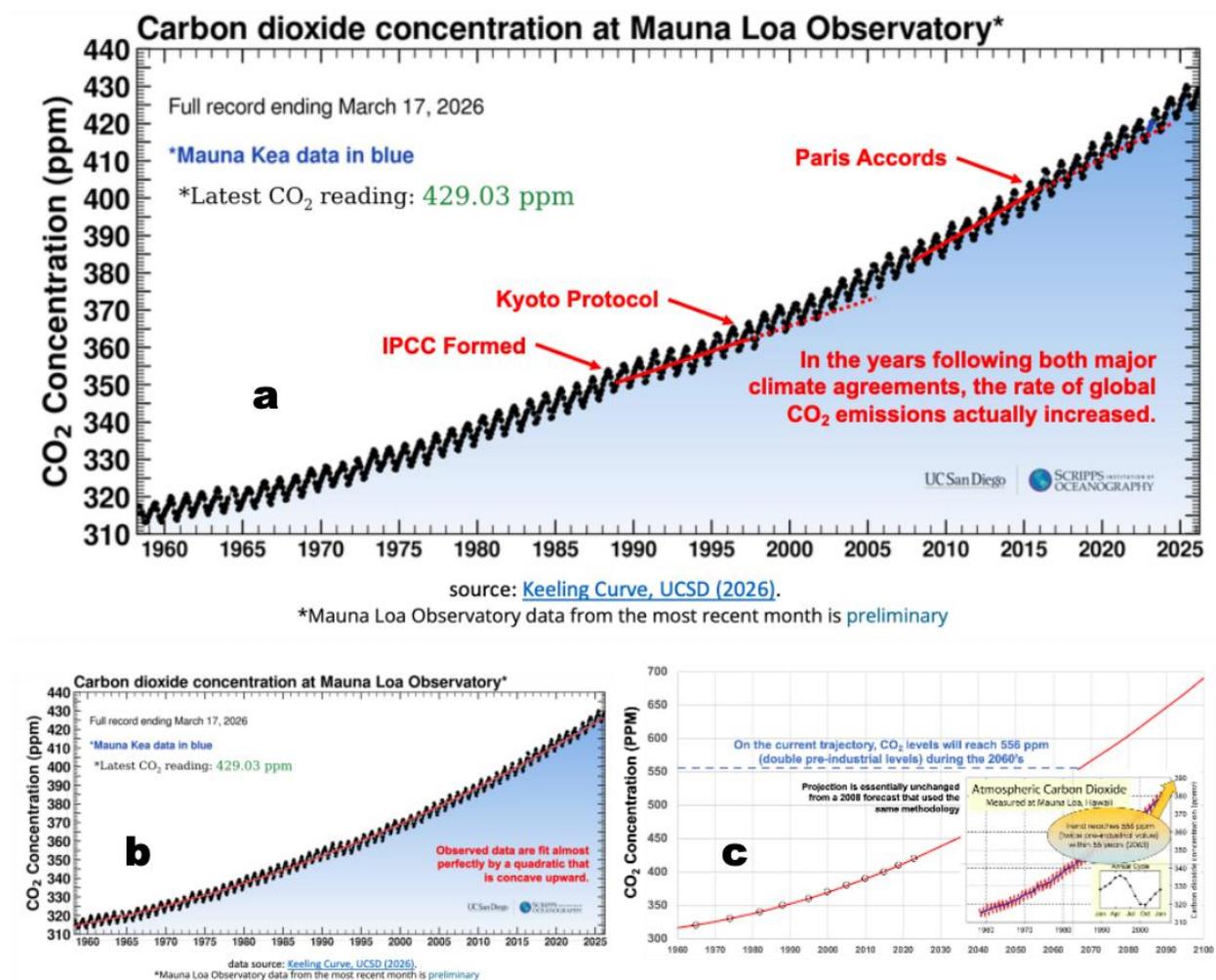


Figure 1. The Keeling Curve. Reported atmospheric CO₂ concentrations as measured at Mauna Loa, overlaid by the timing of major climate agreements (a), a quadratic fit to the current data (b), and a comparison of the quadratic fit to the current data to a quadratic that was fit to the observed data through 2008 (c); the fits are nearly identical. Both predict a doubling of pre-industrial CO₂ levels by the decade of the 2060's.

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And now global temperatures are clearly accelerating (see **Figure 2**) and are also almost perfectly fit by a simple quadratic. The World Meteorological Organization recently declared [2025 as one of the warmest years on record](#). Last year they reported that the global temperature anomaly exceeded [1.5°C for the first time in 2024](#).

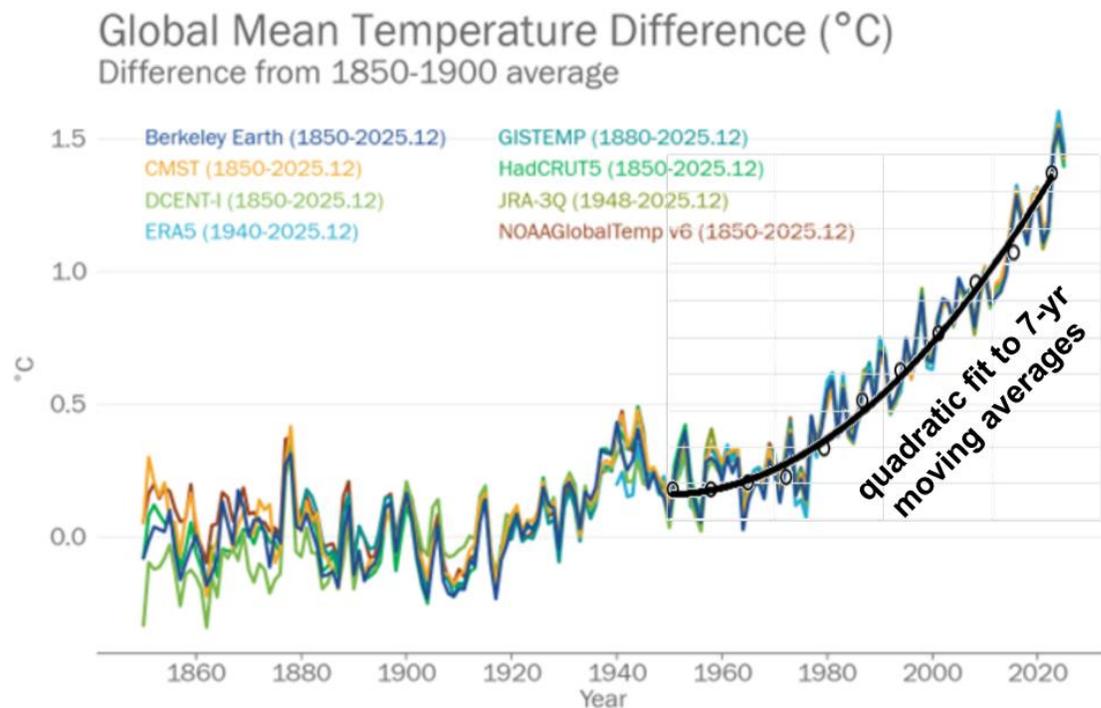


Figure 2. Observed global temperature anomaly, showing an excellent quadratic fit to the past 75 years of data. Data source: [WMO](#).

During my first few months with the EK Science Team, I have learned of new peer-reviewed publications confirming that the rate of warming has indeed accelerated (e.g., [Foster & Rahmstorf, 2026](#)), and another disturbing paper ([Ripple et al., 2026](#)) which asserts that several so-called ‘tipping points’ are now threatened, various combinations of which could lead to ‘runaway warming’ toward a completely different steady-state condition commonly referred to as a ‘hothouse.’ They further assert that the most likely cause of the observed acceleration is due to the positive feedback of additional water vapor in the atmosphere. Water vapor is the most potent GHG (responsible for around 70% of the warming effect). As oceans warm, more water vapor evaporates into the atmosphere, making for higher dew points (i.e., more humidity), and more heat-trapping effects – hence the acceleration in warming. This process will eventually stop once all of the extra cloud cover prevents incoming sunlight from striking the surface of the planet, but only after shifting Earth into the type of climate last experienced during the time of the dinosaurs, around 20°F warmer than current conditions, with the planet’s ice sheets mostly gone and sea levels some 100-250 m higher. How quickly could that happen? Nobody knows. And nobody knows if we’ll still be around to find out!

But in the meantime, those of us who plan to be around had better get ready. The accelerating warming and other more extreme weather will have intensifying impacts on the quantity and quality of agricultural commodities produced throughout the world. And this will have a domino effect on all the many companies involved in food system supply chains. The talented science team at EK is helping clients in those supply chains take steps to adapt and become more resilient in the face of this challenge. The time to act is now.