History's Lessons – Ignored

By John Benson

May 2024

1. Introduction

If anyone follows the modern history (say for the last 100 years) like I do, it's full of examples of various nations / economies happily ignoring a series of prior disasters, until much worse disasters happen. This has happened in the following cases:

- World War I (WW-1)
- The Great Depression (1929-1939)
- WW-II
- The Oil Crisis of the 1970s
- The Financial Crisis of 2007-2008
- The COVID-19 Pandemic

Now we are on track to repeat the above events on perhaps an even larger scale with the looming climate crisis. Not that we have not made major attempts to understand and forecast and very minor attempts to remediate global warming – we have done that through the following actions (including in Section 2):

- Intergovernmental Panel on Climate Change (IPCC) Working Group 2 (WG2) Climate Change Impacts Assessment (1990)
  https://www.ipcc.ch/report/ar1/wg2/
- Climate Change 1995, Impacts, Adaptations and Mitigation of Climate Change: Scientific-Technical Analyses, IPCC WG2
  https://www.ipcc.ch/report/ar2/wg2/
- Climate Change 2001: Impacts, Adaptation, and Vulnerability, IPCC WG2
  https://www.ipcc.ch/report/ar3/wg2/
- AR4 Climate Change 2007: Impacts, Adaptation, and Vulnerability, IPCC WG2
  https://www.ipcc.ch/report/ar4/wg2/
- AR5 Climate Change 2014: Impacts, Adaptation, and Vulnerability, IPCC WG2
  https://www.ipcc.ch/report/ar5/wg2/
- Climate Change 2022: Impacts, Adaptation and Vulnerability, IPCC WG2
  https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/

By the way, the IPCC published many more specialized reports along with the above six assessment reports. Go through the following link to see them all:
https://www.ipcc.ch/reports/

Also, the US has many reports including assessment reports through the link below (starting in 2001):
https://www.globalchange.gov/our-work/national-climate-assessment

I expect many other countries also have reports, and my home state (California) has a huge number of climate-assessment-related reports (below):
https://climateassessment.ca.gov/techreports/full-list.html

2. Where Are We Today?

Since I have been extremely interested in Climate Change since I retired in 2013, and have closely monitored (and written about) actions we are taking to mitigate this I have noted the following:

- *82% of U.S. energy comes from fossil fuels, 8.7% from nuclear, and 8.8% from renewable sources. In 2023, renewables surpassed coal in energy generation.*[1]
- *Wind and solar are the fastest growing renewable sources, but contribute less than 3% of total energy used in the U.S.*
- *In 2024, 9.2% of all new car registrations were for electric vehicles, according to an Experian Automotive report.*[2] *This is an increase of 1.2 percentage points from 2023. If we fly higher to a bird' s-eye view of the roughly 292.3 million cars on the road in 2024, 1.4% of those were electric vehicles.*

Given the tiny number of EVs on the road, I would guess the number of EV (or otherwise zero greenhouse gas) trucks on the road is miniscule indeed. Thus, since it has been 35 years since the IPCC AR1 report was released, we have made virtually no progress towards a greenhouse gas (GHG) free world in this time.

In the last few years, we have started to feel some minor pain from disasters that were significantly made worse by climate change. These were mainly from (1) wildfires, (2) rapid intensification of tropical storms and hurricanes before land-fall, (3) increasing range and intensity of tornados and (4) off-season heat-waves in the US. Regarding the latter, in mid-May as I'm writing this, we are experiencing a major heat wave.[3] See the map (May 16, from reference 3) below.

My main question is: how much pain must we experience before we elevate the priority of reducing the amount of GHG we are emitting to front and center. Even then, it will take decades to bring GHG emissions (world-wide) down close to zero and implement other major steps to start to mitigate climate change. This delay would result in the "much worse disaster" that I mentioned in the first paragraph of this paper.

---

[1] Center for Sustainable Systems, University of Michigan. 2024. "U.S. Renewable Energy Factsheet." Pub. No. CSS03-12, https://css.umich.edu/publications/factsheets/energy/us-renewable-energy-factsheet

[2] https://www.experian.com/automotive/ev-resource-center

[3] https://abcnews.go.com/US/early-season-heat-wave-blanket-southern-us-scorching/story?id=121872723

3. Future Health

Trying to predict the future is tricky business, and when one is dealing with a difficult task, it is best to let science guide you. For that reason, I decided to rely on some writing by the Science Guy (yes, THAT Science Guy).

It started out as a climate crisis. It's become the greatest health crisis we've ever seen. You've watched it happening – first, in the headlines. Today, maybe right outside your window.[4]

The world's getting warmer and heatwaves are turning lethal. Storms are getting stronger, putting millions of us in harm's way. Diseases are spreading farther and faster. If you're a farmer, plant diseases and pests are showing up sooner and hanging around longer every season. Rainfall patterns are changing. Food and clean water are getting harder to come by.

It's all connected, and it all goes back to our burning coal, gas, and oil – fossil fuels. We're taking ancient carbon and putting it in the air. We're producing greenhouse gases that are heating up the earth's land and ocean. As temperatures rise, dangerous heatwaves, droughts, and wildfires are happening more and more often.

Things are changing faster than we can deal with them. Lakes and rivers are both drying out and flooding. Crops are withering or drowning. We can't grow them where we've been growing them for centuries. Warmer seasons mean mosquitos can carry diseases like Zika and malaria more quickly. And the extra heat throws the water cycle out of balance, leading to more powerful storms and floods and droughts everywhere from Florida to the Philippines.

Meanwhile, fossil fuels also fill our air, water, and soil with toxic chemicals that make us sick – causing everything from asthma to brain dysfunctions that last a lifetime. And this, by the way, is really bad for our kids.

If you think it adds up to a more dangerous and unhealthier planet for all of us, you're right! But here's the good news: It doesn't have to be this way. Today we can skip the dirty stuff and protect our health by powering our lives with affordable clean energy. Best of all, a clear majority of people around the world want to do just that.

It's time to act. After all our health is in the balance. The choice is clear: Protect our planet, protect ourselves.

3.1. The Climate Guy

Polarization short-circuits in the presence of Bill Nye…

Bill has built a career on comedic clarity. He reaches across generations, beliefs, and backgrounds with a message rooted in science and delivered with electric humor and unwavering purpose. His comedy punctuates each fact. He's never sidestepped complexity. Rather, open it wide and let the light pour in. Today, he stands as Sierra Club's Climate Trailblazer, a title that fits him perfectly.[5]

[4] Bill Nye Explains: How Does Climate Change Impact Our Health? February 21, 2019, https://www.climaterealityproject.org/blog/bill-nye-explains-how-does-climate-change-impact-our-health

[5] Michael Kittilson, USC Annenberg Center for Climate Journalism and Communication, "Bill Nye the Climate Guy," May 1, 2025, https://climatecenter.usc.edu/bill-nye-the-climate-guy/

I felt lucky to introduce him and announce his award. From the podium, I looked out at a room already charged with anticipation. He gave me – and so many students – permission to be fully ourselves. To embrace curiosity. To lean into our nerdiness without apology. To care about science, space, climate, and coding as much as we cared about sports. He made it powerful.

Standing on stage at the Sierra Club Trailblazers Ball, I watched Bill approach to receive his award as the applause rose from the floor to the rafters, it became impossible to miss what sets Bill apart in the climate movement. He knows the science because he has lived it, taught it, and trusted it. But knowledge alone does not move people. Bill moves people because he understands the deeper equation: information multiplied by imagination equals momentum. He brings the scale of climate science down to eye level, never reducing it, never embellishing it.

He speaks to the urgency of rising seas and burning forests without closing the door to hope. He builds a bridge between data and decision, where every audience – from elementary school classrooms to congressional committees – feels invited to cross. His language is direct, never diluted. His delivery lands because it respects the intelligence of the listener while unlocking the emotional stakes of the moment.

Bill Nye has never waited for permission to speak plainly about the climate crisis. He treats science as a living, breathing force that belongs not in isolation, but in public life. He crafts his messages to travel through every medium, every conversation, every debate where facts fight to be heard. He gives those facts rhythm. He gives them pulse.

And then, there's his fire.

*Bill Nye doesn't shy away from the edge. In 2020, he stood on camera, lit a globe on fire, and said plainly: The planet's on f**ing fire.* That wasn't outrage for its own sake. It was timing, it was tone, it was truth cut sharp enough to be shared across generations. He shocked people. But said what others were already thinking. Science communication isn't neutral. It's hot when it needs to be. Bill speaks fire, and he uses that heat to set off chain reactions.*

He brought that same flame to the "Too Hot Not To Vote" campaign, where climate science met civic urgency. There was no lecture. There was no over-explaining. Just heat, humor, and the unmistakable message that voting can be both a right and a response. He delivered it with the same comedic rhythm that first made him a household name, but now with the urgency of a man who knows exactly what the stakes have become.

Bill Nye's comedy is propulsion. An accelerant. His timing, his tone, his punchlines all function like catalysts, triggering reactions that stick. He uses laughter the way a rocket uses thrust: to break through resistance and deliver truth into orbit.

The Trailblazer Award belongs in his hands because he treats climate leadership as a profound responsibility. Through media, activism, and relentless public engagement, Bill has transformed climate communication into climate mobilization. His work expands the conversation from charts and reports into choices and actions that change how we act on our planet's future.

I was there. I saw the moment when the chant became a rallying cry, when comedy and science fused into a movement. And in that moment, Bill Nye showed that his voice ignites change – one laugh, one fact, one fearless sentence at a time.

3.2. Climate Change, Food Security and Health

Author's comment: The above section and subsection contain reasonable quotes and other actions by Bill Nye, but they were not what I was looking for. This search started out with a very short, but very insightful quote from Mr. Nye, but I could not find any longer text on this subject (the quote in section 3 is pretty close). Immediately below is the original quote.

"Climate change and the displacement of hundreds of millions of people will spread disease."

However, I looked elsewhere and found some additional content (below).

Climate change is likely to threaten food production, quality, prices, and distribution systems on a global scale.[6]

Livestock and fish production are expected to decline. Prices may increase due to reduced food production and expensive petroleum for agricultural inputs like pesticides and fertilizers.

Many crop yields are predicted to decline because of the combined effects of changes in:

- *Rainfall*
- *Severe weather events*
- *Increasing weeds and pests on crop plants*

Although it's hard to understand in the US, but when most of the world's population deals with major food shortages, they frequently migrate to other regions (vs. staying where they are and starving). But either because of lack of nutrition in their starting-point, or diseases encountered enroute, they end-up sick. If their sickness is caused by communicable disease, they end up carriers of the disease(s) they acquire.

The above scenario is a secondary effect of climate change, but a likely one.

[6] US Centers for Disease Control and Prevention (CDC), Climate and Health Program, "Food Security," https://www.cdc.gov/climate-health/php/effects/food-security.html