A Climate Reality Check: Rethinking Carbon Dioxide and Net Zero

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Why We Need to Rethink What We Thought We Knew About CO_2 Absorption

Every so often, science gets a reminder that the natural world doesn't bend to our models. The recent findings from Oak Ridge National Laboratory, reported by SciTechDaily, are one of those reminders. For years, we were told that plants absorb a certain, tidy amount of carbon dioxide (CO_2) . Now we learn that figure was off by a wide margin – about 30%. That's not a rounding error. That's a sign we've been working with an incomplete picture.

This isn't about pointing fingers. It's about recognising that even well-intentioned science can drift into certainty too quickly. When a process as fundamental as photosynthesis turns out to be far more powerful than we assumed, it's worth asking how we missed it – and what else we might be overlooking.

The Problem Was Never the Plants — It Was Our Assumptions

For decades, global CO_2 absorption was estimated using indirect signals: satellite greenness, atmospheric readings, and scattered ground measurements. Useful tools, but hardly precise. They told us what vegetation looked like, not what it was doing.

The new research used carbonyl sulphide — a gas plants absorb during photosynthesis and never release. It's a cleaner, more honest indicator of what's actually happening. And once scientists measured it properly, the truth was obvious: Earth's vegetation is pulling far more CO_2 out of the air than we gave it credit for.

That should make us pause. If a single improvement in measurement can overturn decades of estimates, then maybe the issue wasn't the data – it was our confidence in it.

A recent trip took me into the heart of the Borneo Rain Forest. Carbon Dioxide readings were taken as we moved through the forest from early morning to sunset. The first reading of 410 parts per million (ppm), gave no hint of the surprise that followed. As the day moved forward the readings got lower and lower, to 280 ppm at sunset. Then on the second day the same occurred. At sunrise 415 ppm, followed a gradual decline – 380 – 355 – 332 – 310 – 275 – 220 ppm at sundown.

The conclusion being that the rainforest was literally "hovering" CO_2 out of the atmosphere at an increased photosynthetic rate. Conditions were ideal with sun, water and terrain fertility.

The same process occurred on the third day. But with an even lower final reading of 215 ppm.

It was now abundantly clear that our present estimates of plant photosynthetic capabilities were considerably lower than actual.

In direct consultation with Professor William Happer, he advised that these readings were consistent with his work.

Underestimation Has Real-World Consequences

Some will call this good news. In a way, it is. A stronger natural carbon sink means the planet is more resilient than we thought. But it also means our climate models – the ones used to guide policy, investment, and public messaging – were built on shaky foundations.

When you underestimate plant absorption by nearly a third, you misjudge:
– how fast CO_2 accumulates
– how effective forests really are
– how ecosystems respond to change
– how much urgency we assign to different solutions

This doesn't undermine the reality of climate change. It simply shows that our understanding is still evolving – and sometimes dramatically.

A Bit More Humility Wouldn't Hurt

The lesson here isn't that scientists were careless. It's that complex systems demand humility. Nature doesn't behave according to our spreadsheets. It behaves according to its own rules, and we're still learning what those are. The ORNL findings should

encourage a culture of questioning, not defensiveness. Science moves forward when we admit what we don't know, not when we pretend the gaps aren't there.

Better Tools, Better Models, Better Thinking

If anything, this discovery should strengthen our resolve to measure more accurately, model more honestly, and communicate uncertainty more openly. The world doesn't need perfect predictions. It needs adaptable thinking. Plants have been doing their job quietly and effectively all along. It's time our science caught up.

Finally it pays for us not to forget that very vital by-product of photosynthesis that we all need every minute of our lives, its called oxygen.

Net Zero: A Where -To From Here

The current discourse on climate change and environmental policy reveals a complex landscape of scientific understanding, political rhetoric, and societal perception. The assertion that climate change is inevitable and that efforts to mitigate it, such as achieving Net Zero, are misguided, warrants a thorough examination grounded in scientific evidence and pragmatic policy considerations.

It is widely acknowledged that climate systems are inherently dynamic, driven by natural forces that have operated over geological timescales. The premise that human activity, particularly the emission of CO_2, is the primary driver of recent climate variations has been a central tenet of the climate change narrative. However, recent research and empirical data challenge this view, suggesting that the relationship between CO_2 levels and global temperature is more complex than previously understood.

Historical climate data indicate that CO_2 concentrations have fluctuated significantly over Earth's history, often in conjunction with temperature changes. Notably, during the Pleistocene epoch, ice ages and interglacial periods corresponded with varying CO_2 levels, but the causality and feedback mechanisms remain subjects of scientific investigation. The assertion that current CO_2 levels, approximately 410 ppm, are dangerously low and that further reduction could be catastrophic is a contentious point. While it is true that CO_2 is essential for plant photosynthesis, the notion that lowering atmospheric CO_2 below certain thresholds would lead to widespread ecological collapse oversimplifies the complex interactions within Earth's biosphere.

Furthermore, the concept of Net Zero – aiming to balance emitted and absorbed CO_2 – was predicated on the assumption that stabilizing or reducing atmospheric CO_2 would directly influence climate stability. Yet, climate models and empirical observations suggest that climate systems are influenced by a multitude of factors, including solar radiation, ocean currents, volcanic activity, and natural variability. Achieving Net Zero does not guarantee a return to a pre-industrial climate state, nor does it necessarily prevent climate fluctuations.

It is important to recognize that climate change is an ongoing process characterised by natural variability. The idea that human intervention can halt or reverse climate change entirely is overly optimistic and neglects the scale of natural forces at play. The notion that climate cannot go backwards is a misinterpretation; climate has historically undergone significant shifts, including ice ages and warm periods, driven by factors beyond human influence.

Public perception and policy responses have often been influenced by alarmist narratives, which can have detrimental societal effects. For instance, anecdotal evidence from educational settings, such as the story of children expressing despair about their future, underscores the psychological impact of climate anxiety fostered by exaggerated claims. While fostering environmental awareness is vital, it must be balanced with scientific accuracy to prevent fostering hopelessness or misinformation.

The hypothesis linking increased atmospheric CO_2 to global warming has been scrutinized extensively. A comprehensive review of scientific literature from 1850 onward reveals that the correlation between CO_2 and temperature is not as straightforward as often portrayed. In fact, some studies suggest that temperature increases may precede rises in CO_2, indicating that CO_2 may be a consequence rather than a cause of warming. This perspective aligns with the understanding that climate systems are influenced by multiple feedback mechanisms, including water vapor, cloud cover, and solar activity.

Adaption is the Key

Given this complexity, policy directions should shift from attempting to control climate through emission reductions alone to focusing on adaptation strategies. Humanity has demonstrated resilience and ingenuity in responding to natural disasters – floods, hurricanes, earthquakes, and other extreme events – and should prioritize strengthening infrastructure, emergency response capabilities, and community preparedness.

Enhancing disaster response infrastructure involves several key components:

- Upgrading healthcare facilities, including hospitals and emergency medical services.
- Expanding search and rescue operations, with specialized personnel trained for diverse environments such as mountains, water bodies, and snow-covered terrains.
- Developing comprehensive communication networks, including command centers with multiple channels, to ensure rapid coordination during crises.
- Stockpiling essential supplies – food, water, medical supplies, and shelter materials – to support affected populations.
- Implementing robust transportation and logistics systems, including rescue vehicles, helicopters, and marine vessels, capable of reaching remote or stranded communities.

Effective disaster management also requires trained personnel capable of operating in various challenging environments. This includes specialized teams for mountain rescue, marine rescue, urban search and rescue, and medical response units. The focus should

be on building a flexible, well-equipped, and well-trained workforce capable of responding to a broad spectrum of natural calamities.

From a governmental perspective, establishing a centralized command structure is essential. In the event of a nationwide disaster, a national emergency control centre – such as Wellington's – would coordinate efforts, allocate resources, and communicate with regional agencies. For localized incidents, regional command centres should be empowered to operate independently, ensuring swift and context-specific responses.

In addition to physical infrastructure, effective communication remains a critical component of disaster response. Ensuring that remote and isolated communities have reliable means of contact – via satellite, radio, or internet – is vital for coordination and timely assistance. Developing resilient communication networks and establishing protocols for rapid information dissemination can significantly improve outcomes during crises.

Training and capacity building are equally important. Personnel involved in disaster response must possess specialized skills and knowledge, including crisis management, first aid, logistics, and environmental awareness. Cross-training staff to operate in different environments enhances flexibility and ensures continuity of operations under adverse conditions.

Financial and logistical planning must be integral to disaster preparedness. Governments should allocate budgets for infrastructure upgrades, stockpiling supplies, and training programs. Regular drills and simulations can help identify gaps and improve response efficiency.

Conclusion

In conclusion, the focus of climate and disaster policy should shift from futile attempts to control natural variability to adaptive strategies that enhance resilience. Recognizing the limitations of human influence over climate, resources should be directed toward strengthening infrastructure, improving emergency response, and fostering community preparedness. Such an approach aligns with historical lessons of extinction and survival, emphasizing adaptation as the most pragmatic and sustainable path forward.

In conclusion, the focus of climate and disaster policy should shift from futile attempts to control natural variability to adaptive strategies that enhance resilience. Recognizing the limitations of human influence over climate, resources should be directed toward strengthening infrastructure, improving emergency response, and fostering community preparedness. Such an approach aligns with historical lessons of extinction and survival, emphasizing adaptation as the most pragmatic and sustainable path forward.

Implementing these measures requires coordinated effort across governmental agencies, private sector stakeholders, and local communities. By prioritizing resilience and adaptability, humanity can better navigate the inevitable changes in our climate and environment, ensuring the safety and well-being of future generations.

So it’s time to lift the burden from the minds of New Zealanders: there is no Climate Emergency and – along with Net Zero – it can be put to bed with Rip Van Winkle.