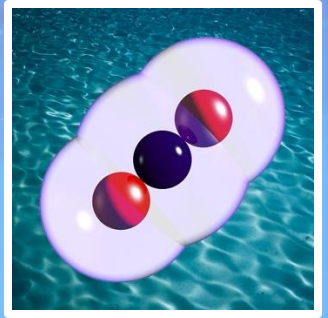
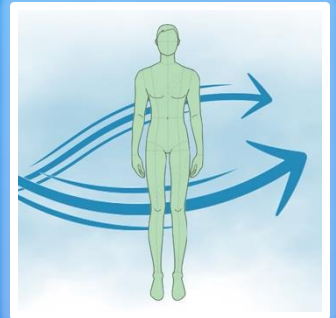


FALLING UPWARDS



New Science



Vita Quests



Extreme Weather



Movie Review



Conspiracy
Watch

Vita Sapien
Monthly Magazine

October 2024

Falling Upwards is **Vita Sapien Organization's** monthly magazine that outlines the simultaneous collapse of the global ecosystem and the transition to a potential sustainable future called the Verdant Age. Vita Sapien outlines a sustainable life philosophy called Vita Worldview. Followers of this worldview are called Vitans. Are you a Vitan?

Join the Vita Sapien network

Vita Sapien innovates at the intersection of environmental science & ecological spirituality to create a worldview that offers the best chance for humanity to survive the 21st Century and thrive thereafter.

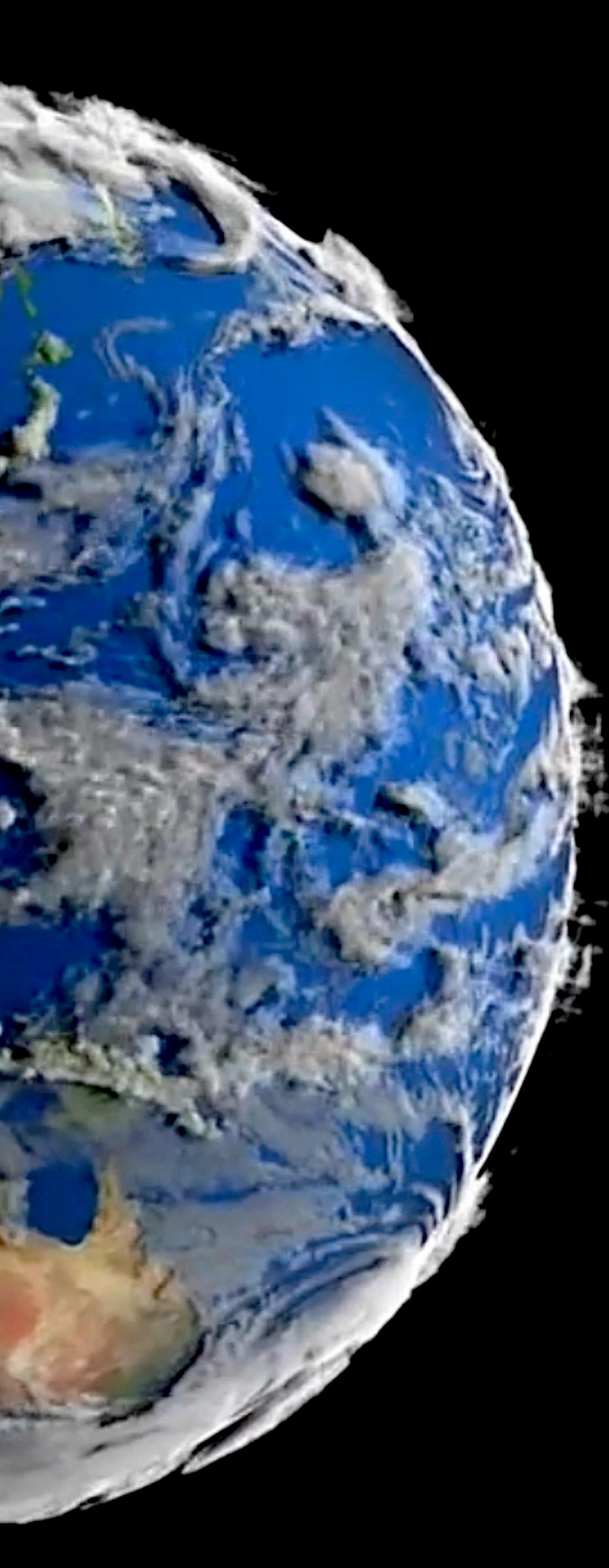


Ascending, not drowning



Awakened to the unfolding climate and ecological crisis, 53 million people undergo a spiritual transformation, reconnecting with the Living Planet and guiding humanity's ascent to the Verdant Age.

vitasapien.org



Gya from Space

Gya is name of a spiritual belief that all the animals and plants on Earth - plus the ocean, atmosphere and soil – are a single living organism.

We humans are cells in the body of this planetary life-form, just like the trees and the bees, the whales and the snails.

Believing in Gya changes our frame of reference to the Earth, and helps us to understand that our wellbeing and that of the Living Planet is intertwined.

Introducing Gya

Vita Sapien organisation was originally conceived as a religion devoted to Gaia. However, it soon became clear that there were problems with the use of Gaia for a religion.

A religion involves a belief in a supernatural being, principal or thing. Supernatural, in this case means something that is beyond the proof of science. However, Gaia was conceived through science: the Gaia Hypothesis and later Gaia Theory. Also, Gaia Theory says that life on Earth behaves in the manner of a organism, whereas Vita Sapien's belief is that all life on Earth actually is an organism.

In place of the word Gaia, the name *Imperium vitae-planeta* was conceived in September 2018 and announced to the world through an Independent Australia article titled **The Empire of Life Needs a Proper Name**.

The contracted name is *Vitae-planeta*.

Unfortunately, even the contracted name *Vitae-planeta* is too long and complicated to catch on. It has 12 letters, it is hyphenated, it is Latin, its meaning is not implicit, and people frequently mispronounce it.

What's needed is another name, one that is simple and speaks to the root of the idea: Gya.

As of today, the living organism that is comprised of all life on Earth, plus the ocean, atmosphere and soil is referred to by three names: *Imperium vitae-planeta*, *Vitae-planeta*, and Gya.

Gya gives a nod to the name Gaia, but makes it clear that there are subtle differences. Gya is just 3-letters. Gya is also short for Giga-Years-Ago – billion years ago – which speaks to Vita Sapien's interest in deep history.

Vita Sapien Quests

This month we take a deep dive into the Vita Sapien Quest:
Return to the Flux.



i, biosphere



Live with Earthity



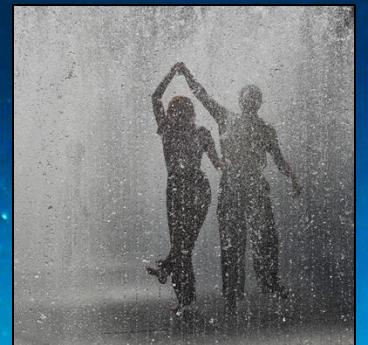
Practice Vitamission



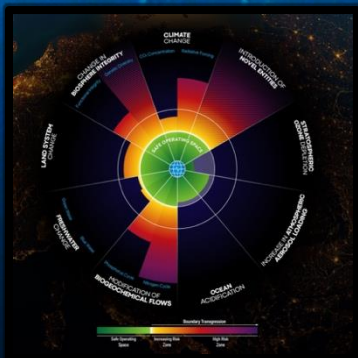
Grow Something



Be in Nature



Embrace the Storm



Know Your Boundaries



Celebrate the Moon



Cosmos & Magma



Reinvent New Year



Know the White Horse



Return to the Flux

Return to the Flux

The concept of Flux is fundamental to understanding the place of humans as a part of the biosphere. Flux refers to the substances that surround us in the ocean, atmosphere and soil including minerals and elements.

Through the process of life, Flux is converted to Form: the skin and bones and muscle and tissue that make up living organisms.

FLUX / FORM

FLUX

STRUCTURLESS:
HIGH ENTROPY
GAS / LIQUID

FORM

STRUCTURED:
LOW ENTROPY
SOLID

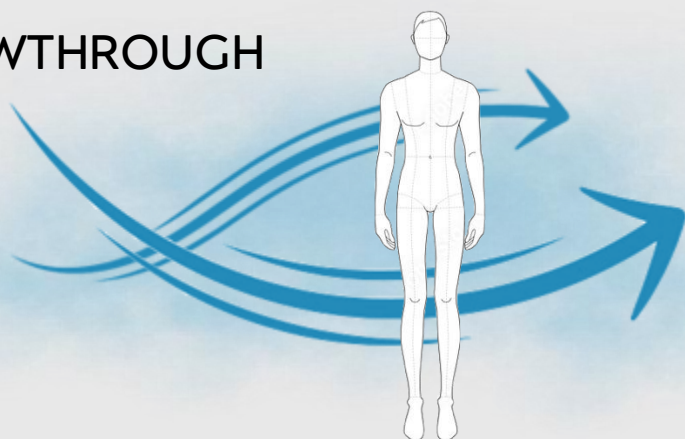
All the energy and compounds in a body will be replaced multiple times over a lifetime. While the specific atoms of minerals and energy sources we consume may be used and replaced countless times, the body maintains a balance by constantly replacing, recycling, and discarding these essential components throughout life. This is Flowthrough.

COMPOSITION



65%	Oxygen
18.5%	Carbon
9.5%	Hydrogen
3.5%	Nitrogen
3.5%	Other Elements

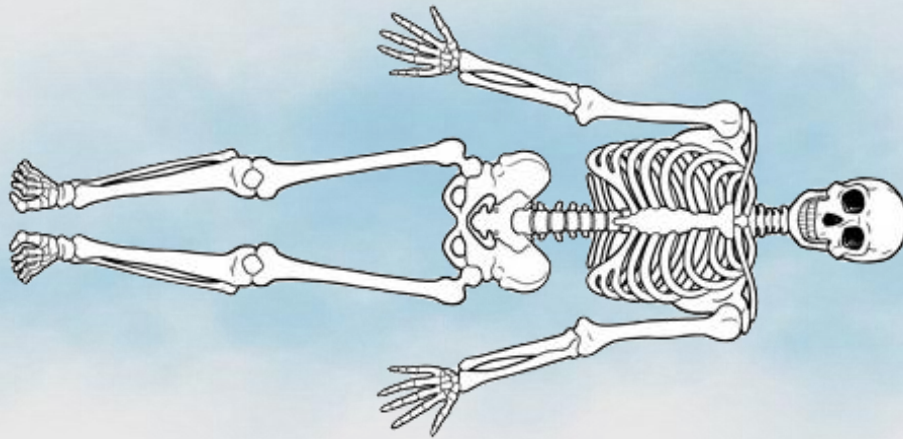
FLOWTHROUGH



Some minerals have a daily residence, like sodium, potassium and magnesium. Other minerals such as the calcium in the bones have a much longer residence time measured in years.

When one dies, the minerals and energy in the body returns to the Flux from where it can be absorbed into the bodies of other living organisms. This is referred to as *revitalization*.

In Vita Sapien's philosophy, the individual self dies with the body and there is no eternal soul that lives-on after death. There are however, two two types of spirit: somatic and extrasomatic.



The somatic spirit animates a living being; it is the vitality, the spark of life that ceases when the body dies. The extrasomatic spirit is the evidence of their passing.

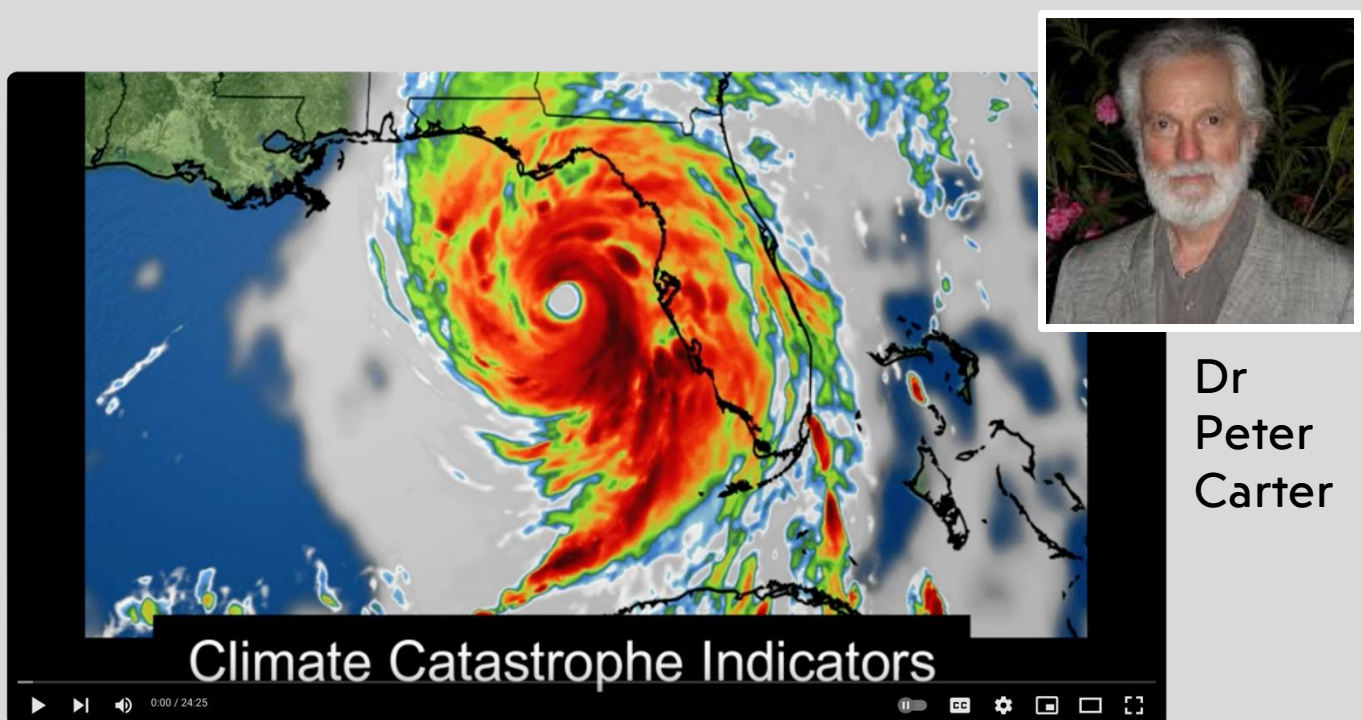
The extrasomatic spirit of a dinosaur, for example, is the fossils in the rock or the footprints preserved in ancient mud. The extrasomatic spirit of a human might be the fond memories or the ideas that they leave behind. If they planted a forest, the extrasomatic spirit is the trees. The trees themselves have somatic spirit. In this way, life begets life.

Return to the Flux is a quest that when one dies the minerals and energy are returned to the Flux promptly so that revitalisation might begin. For humans this calls for funerary practices including cremation (using living biomass, such as wood, and not fossil fuels) or green burials in forest cemeteries, or even sea burial.

OCTOBER EXTREME WEATHER

The gripping drama weatherwise in October was the remains of Hurricane Helene and the Hurricane Milton a week later. Hurricane Kirk petered out in the Atlantic and flooded Western Europe.

If you want to understand why the weather is so crazy, watch this excellent video by Dr Peter Carter on **Climate Catastrophe Indicators**.



<https://www.youtube.com/watch?v=Uk9vulmEbqc&t=222s>

This new era of extreme weather is not a new normal. Instead, it is a way point on a journey in which the weather get more extreme year after year until it can't get any worse, or we wake-up as a civilization and sort this mess out!

Vita Sapien's five point plan: 1. Transition to sustainable renewable energy. 2. Draw-down a trillion tons of CO2. 3. Rewild a third of nature. 4. Clean up the mess of industrial civilization. 5. Awaken hearts and minds to the role of the biosphere in providing our life-support system.

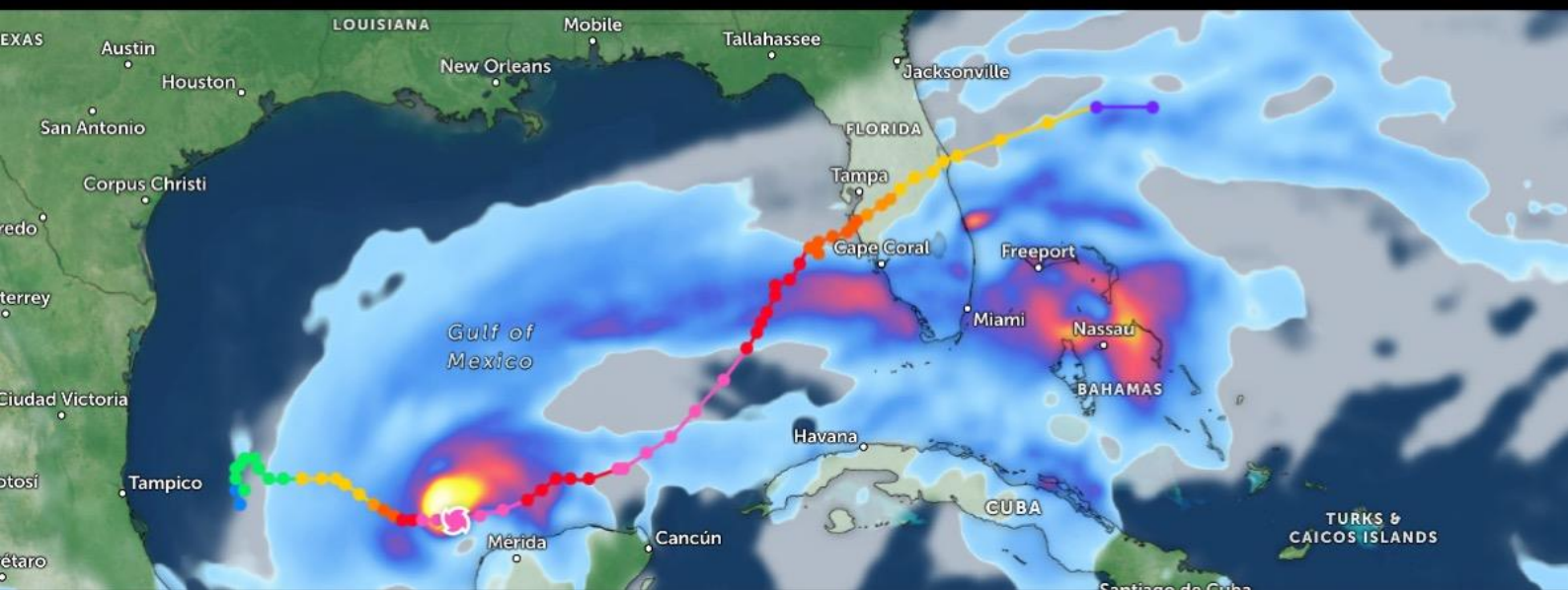
Hurricane Kirk turned into a European Windstorm and brought vast amounts of rain to Western Europe. More than 1 million people across coastal areas of Europe were placed under evacuation orders. The yellow dots in the graphic show wind damage reports.



Ex-Hurricane Helene drifted north over the mountainous areas of Georgia and dropped vast amounts of rain, wrecking roads and homes and necessitating mule-trains to transport supplies to stranded citizens.



Hot on the heels of Hurricane Helene, Hurricane Milton comes ashore on the west Florida coast just south of Tampa with a 12 foot storm surge.

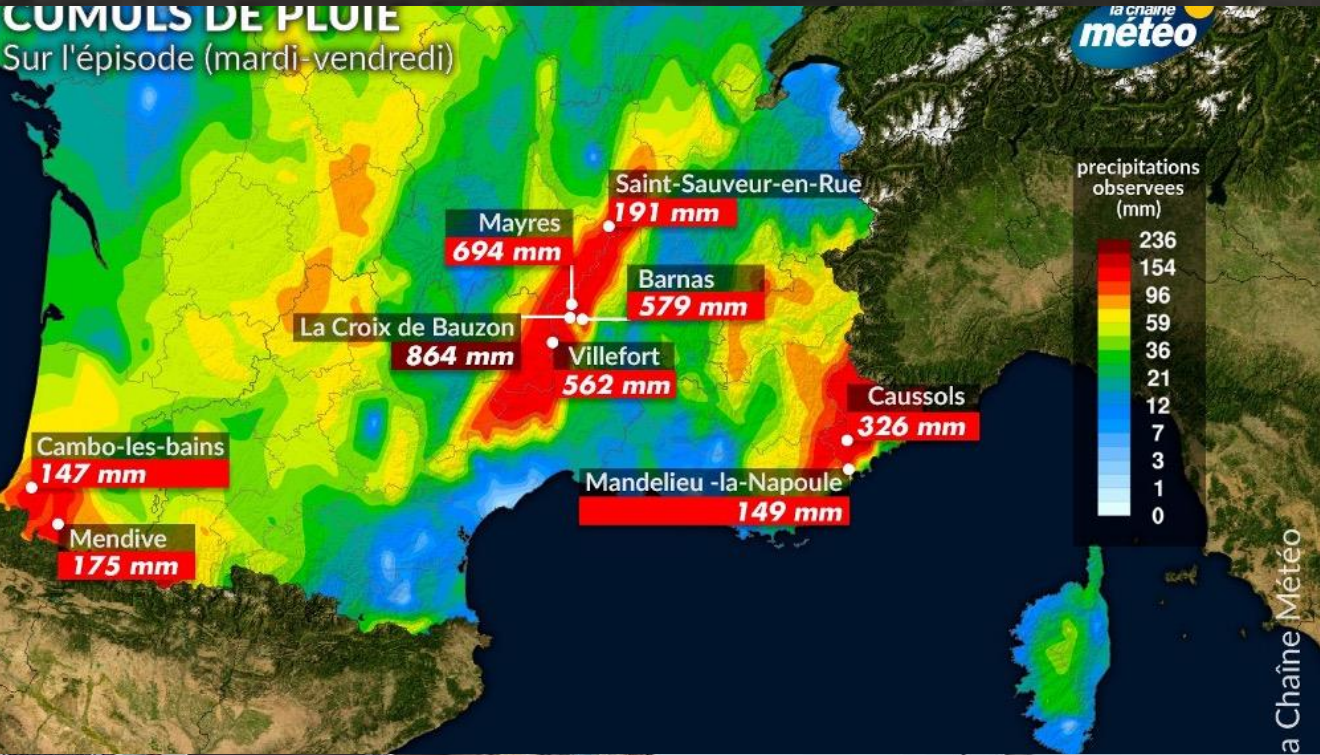


Triple tornados strike Kadra, UAE



CUMULS DE PLOIE
Sur l'épisode (mardi-vendredi)

la chaîne
météo





The root cause of the climate and ecological crisis is that most of the 8 billion people on Earth hold an unsustainable worldview.

The solution is a sustainable worldview that is grounded in science, reality and nature-based spirituality.

Vita Worldview is a synthesis of:

- Wisdom from ancient philosophies
- Environmental science
- Ecological spirituality
- Indigenous perspective on nature
- Never-before-seen herbs & spices

When 53 million Western adults adopt Vita Worldview they will usher-in a mass-movement to end the Anthropocene and begin the Verdant Age.



read **VITA WORLDVIEW** today

vitasapien.org

THE DAY THE EARTH STOOD STILL

MOVIE REVIEW

The Day the Earth Stood Still (2008) is a reimagining of a 1951 movie based on a novel *Farewell to the Master*. In the original telling of the story, a spacecraft lands in Manhattan and the humanoid Klaatu steps out with the giant robot Gort. Klaatu explains that his people have observed humans using nuclear weapons and developing rocketry, and there is concern that we will bring our warring ways to other parts of the cosmos.

Gort is an interplanetary policeman with vast powers which are demonstrated by bringing all the machines in the world to a halt for a day. In the 2008 Keanu Reeves version, Klaatu's mission is to compel the humans to stop destroying the biosphere. Failing that, Gort will annihilate humans from Earth. Sounds like a fair deal, right? Klaatu is arrested and prevented from addressing the United Nations General Assembly with his plea. However, Klaatu is too wily to remain incarcerated for long, and he escapes, with the help of astrobiologist Helen Benson.





Gort doesn't f*ck around.

Helen by the lake

<https://www.youtube.com/watch?v=V2QOfVY1ovM>

Professor Barnhardt

<https://youtu.be/M58EEaGWBBU>

IMDB

https://www.imdb.com/title/tt0970416/?ref_=tt_mv_close

Klaatu's cunning plan to end humanity's cruel dominion over the biosphere commences when key species are lifted from Earth in large orbs. Then Gort disassembles into tiny metallic insects that devour human infrastructure and humans themselves. Supposedly, once the pesky humans are dispensed, with the orbs will return the species back to their habitat to live happily ever after.

It is rare for Hollywood movies to have such explicit themes around the relationship between humans and the global ecosphere. This movie beautifully describes how we are aware of our impending doom through the climate and ecological crisis, but are seemingly helpless to modify our collective behaviour to do anything about it. There are two pieces of dialogue which really lay these themes bare. In the first, Klatu explains his mission to Helen having just witnessed an orb full of frogs ascend from a lake. In the second, he argues with Professor Barnhardt, who tries to compel Klaatu to show mercy to the hapless humans. You can watch the clips in the links to the left.

The Day the Earth Stood Still is science fiction. In reality, it's not Klaatu and Gort who are ridding the biosphere of humans, but the collapsing biosphere itself. The sooner we humans twig to that, the sooner we can find peace with nature, and live our own happily ever after, deep into the Long Future.

HELEN

I need to know what's
happening.

KLAATU

This planet is dying. The human
race is killing it.

HELEN

So, you've come here to help us.

KLAATU

No. I didn't.

HELEN

You said you came to save us.

KLAATU

I said I came to save the Earth.

HELEN

You came to save the Earth...
From us. *Uhh!* You came to save
the Earth from us.

KLAATU

We can't risk the survival of this
planet for the sake one species.

HELEN

What are you saying?

KLAATU

If the Earth dies, you die. If you
die, the Earth survives. There are
only a handful of planets in the
cosmos that are capable of
supporting complex life.

HELEN

You can't do this.

KLAATU

This one can't be allowed
to perish.

HELEN

We can change. We can still
turn things around.

KLAATU

We've watch, we've waited
and hoped that you would
change.

HELEN

Please.

KLATUU

It's reached the tipping
point, and we have to act.

HELEN

Please.

KLAATU

We'll undo the damage you
have done and give the
Earth a chance.

HELEN

Don't do this. Please. We
can change. We can change.

KLAATU

The decision is made. The
process has begun.

Vita Sapien Interviews

In October, Vita Sapien founder Guy Lane sat two interviews



<https://www.youtube.com/watch?v=QtY0MPCqVyQ>



<https://www.youtube.com/watch?v=5yL8ylrZmil>

Stop HAARPING On

The High-frequency Active Auroral Research Program (HAARP) is a University of Alaska Fairbanks program which researches the ionosphere – the highest, ionized part of Earth's atmosphere: haarp.gi.alaska.edu

Through the process of fabulism, HAARP has become a shibboleth of conspiracists who believe that it is being used to create freak weather events such as floods, storms and wildfires.

Conspiracists will often invoke the HAARP weapon when you talk about extreme weather events likely being enhanced by climate change. This is part of the conspiratorial denial of mainstream science, and climate science in particular. Recently, for example, I mentioned to a friend that a typhoon had score a bulls-eye on Shanghai, and he responded, "I was probably HAARP."

Alongside HAARP, you might hear of DEW or Directed Energy Weapons that can supposedly vaporise a row of houses but leave the nearby trees intact, as supposedly happened during a wildfire in the US town of Paradise.



HAARP

High-frequency Active Auroral Research Program



Pissed Off Old Woman @LemonPanda16 · 22m

Replying to @leslibless

It started in Paradise, Ca. then they realized they could get away with destroying American towns using DEWS and **HAARP**. Now here we are 6 years later and they are still getting away with this blatant genocide. **THEY MUST BE STOPPED!**



Should you meet someone who conflates extreme weather events with the HAARP weapon, here's a little trick you might try.

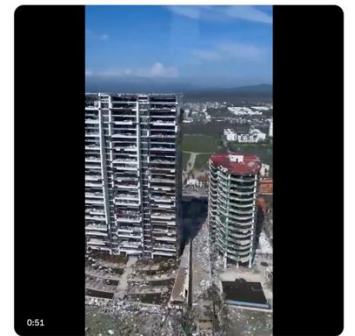
Say to them, "I'll let you tell me about HAARP if you can explain how a thermobaric weapon works." If they are able to explain the mechanics of a thermobaric weapon, then they have at least a grasp of physics.

Typically, they won't take the challenge because the worldview that underlies HAARP belief has a very sketchy relationship to logic and technical detail. This is simply explained as 'they' know how the HAARP weapon works and 'they won't tell us.



#HAARP on Twitter

Vision4theBlind @Vision4theBlind · Oct 28, 2023
Why has there been very little mainstream coverage of the devastation that occurred in Acapulco?
It was hit with a Category 5 hurricane that came out of nowhere
Sounds like HAARP was involved

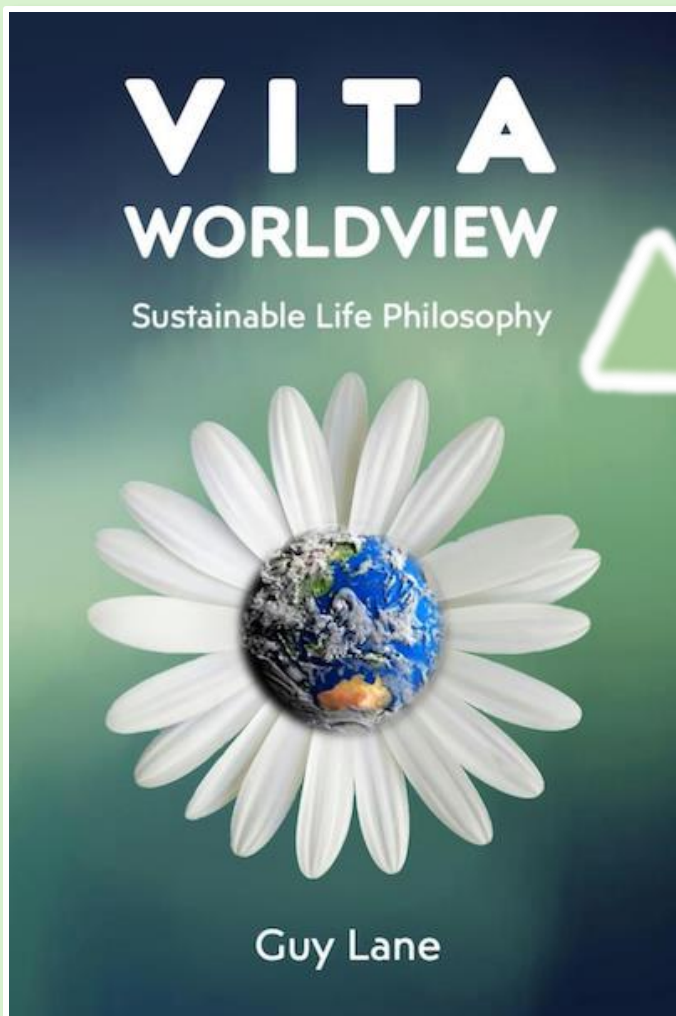


EL GRAN DESPERTAR @destapandolose1 · Oct 12
Florida, EE.UU.
Esto es una manipulación climática geoingeniería ARMAS HAARP puede crear múltiples tornados artificiales a la vez.



#HAARP on Twitter: Hurricane Helene, Hurricane Otis, cirrus clouds, aviation contrails, and water spouts are all attributed to HAARP. One bright spark even thinks that a coral reef restoration project off the Florida coast is a HAARP weapon.

Read Vita Worldview today



Vita Workdview

Embracing Vita Worldview will help you see patterns in the growing chaos, to stay grounded in reality, and map-out the risks and opportunities that lie ahead. You'll experience a sensation of flow as you connect more deeply with our Living Planet and gain insight into the meaning of life on Earth and your individual role within it.

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Visit Vita Sapien website and read for free.

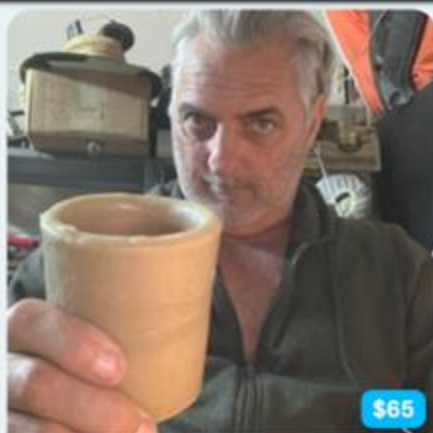
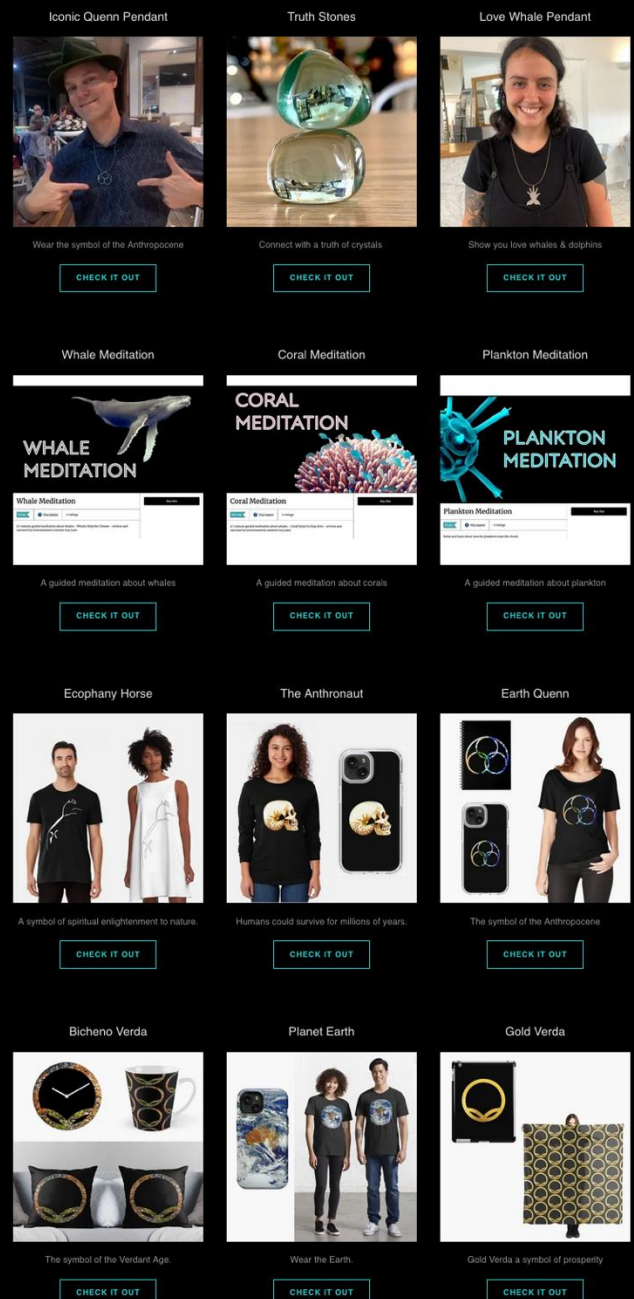
vitasapien.org

Vita Sapien Shop

Vita Sapien Organization offers a range of goods and services to help people develop a deeper understanding of Vita Worldview. Amongst the goods are a range of products that make excellent gifts for Christmas, birthdays, and other important events. At Vita Sapien, we trying to pioneer environmentally friendly gifts including those made of sustainable materials such as beeswax, cork, and hemp.

Consider the Vita Sapien shop for all your obligatory gift purchases.

<https://vitasapien.org/shop>



Beeswax Cup

A unique, hand-crafted beeswax cup.

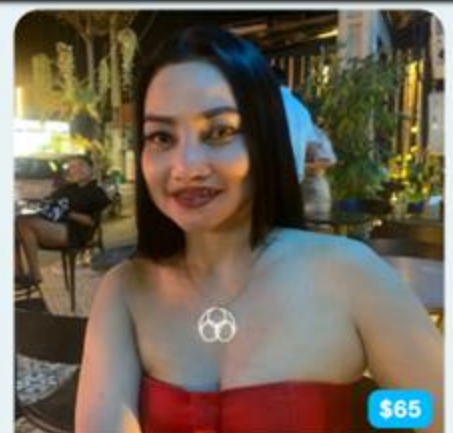
\$65



Vita Worldview paperback

Vita Worldview is Vita Sapien's foundational philosophy. This little book ...

\$25



Quenn Pendant

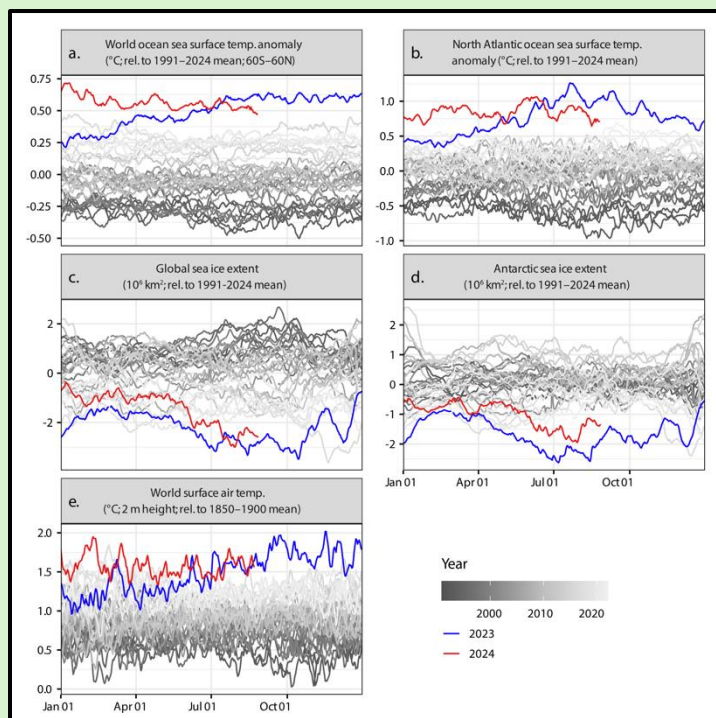
The Quenn is a symbol with a powerful environmental message. When worn as ...

\$65

<https://ko-fi.com/vitasapien/shop>

A Month of Science

The 2024 state of the climate report. Perilous times on planet Earth: "We are on the brink of an irreversible climate disaster."



The 2024 state of the climate report: Perilous times on planet Earth

William J. Ripple, Christopher Wolf, Jillian W. Gregg, Johan Rockström, Michael E. Mann, Naomi Oreskes, Timothy M. Lenton, Stefan Rahmstorf, Thomas M. Newsome, Chi Xu, Jens-Christian Svenning, Cláudio Cardoso Pereira, Beverly E. Law, and Thomas W. Crowther

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We are on the brink of an irreversible climate disaster. This is a global emergency beyond any doubt. Much of the very fabric of life on Earth is imperiled. We are stepping into a critical and unpredictable new phase of the climate crisis. For many years, scientists, including a group of more than 15,000, have sounded the alarm about the impending dangers of climate change driven by increasing greenhouse gas emissions and ecosystem change (Ripple et al. 2020). For half a century, global warming has been correctly predicted even before it was observed—and not only by independent academic scientists but also by fossil fuel companies (Supran et al. 2023). Despite these warnings, we are still moving in the wrong direction; fossil fuel emissions have increased to an all-time high, the 3 hottest days ever occurred in July of 2024 (Guterres 2024), and current policies have us on track for approximately 2.7 degrees Celsius (°C) peak warming by 2100 (UNEP 2023). Tragically, we are failing to avoid serious impacts, and we can now only hope to limit the extent of the damage. We are witnessing the grim reality of the forecasts as climate impacts escalate, bringing forth scenes of unprecedented disasters around the world and human and nonhuman suffering. We find ourselves amid an abrupt climate upheaval, a dire situation never before encountered in the annals of human existence. We have now brought the planet into climatic conditions never witnessed by us or our prehistoric relatives within our genus, *Homo* (supplemental figure S1; CenCO2PIP Consortium et al. 2023).

Last year, we witnessed record-breaking sea surface temperatures (Cheng et al. 2024), the hottest Northern Hemisphere extratropical summer in 2000 years (Easer et al. 2024), and the breaking of many other climate records (Ripple et al. 2023a). Moreover, we will see much more extreme weather in the coming years (Masson-Delmotte et al. 2021). Human-caused carbon dioxide emissions and other greenhouse gases are the primary drivers of climate change. As of 2022, global fossil fuel combustion and industrial processes account for approximately 90% of these

emissions, whereas land-use change, primarily deforestation, accounts for approximately 10% (supplemental figure S2).

Our aim in the present article is to communicate directly to researchers, policymakers, and the public. As scientists and academics, we feel it is our moral duty and that of our institutions to alert humanity to the growing threats that we face as clearly as possible and to show leadership in addressing them. In this report, we analyze the latest trends in a wide array of planetary vital signs. We also review notable recent climate-related disasters, spotlight important climate-related topics, and discuss needed policy interventions. This report is part of our series of concise annual updates on the state of the climate.

Recent trends in planetary vital signs

In 2023, various historical temperature and ice extent records were broken by enormous margins (figure 1; Ripple et al. 2023a). Both global and North Atlantic sea surface temperatures were far above their 1991–2024 averages for much of the year—a pattern that has continued well into 2024 (figure 1a, 1b). Although Antarctic and global sea ice extent have now come into ranges of previous years, they remain well below their 1991–2024 averages (figure 1c, 1d). Global daily mean temperatures were at record levels for nearly half of 2023 and much of 2024 (figure 1e). On our current emissions trajectory, we may regularly surpass current temperature records in future years (Matthews and Wines 2022).

Of the 35 planetary vital signs we track annually (figures 2 and 3), 25 are at record levels (supplemental table S1). The global failure to support a rapid and socially just fossil fuel phase-down has led to rapidly escalating climate-related impacts (table 1). Below, we focus on variables that have either changed greatly or are at record extremes.

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Overconfidence in Overshoot

New science shows that the hotter projected temperatures are increasingly likely.

<https://www.nature.com/articles/s41586-024-08020-9>

Article

Overconfidence in climate overshoot

<https://doi.org/10.1038/s41586-024-08020-9> Carl-Friedrich Schussler^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000}

Global emission reduction efforts continue to be insufficient to meet the temperature goal of the Paris Agreement¹. This makes the systematic exploration of so-called overshoot pathways that temporarily exceed a targeted global warming limit before drawing temperatures back down to safer levels a priority for science and policy^{2,3}. Here we show that global and regional climate change and associated risks after an overshoot are different from a world that avoids it. We find that achieving declining global temperatures can limit long-term climate risks compared with a mere stabilization of global warming, including for sea-level rise and cryosphere changes. However, the possibility that global warming could be reversed many decades into the future might be of limited relevance for adaptation planning today. Temperature reversal could be undercut by strong Earth-system feedbacks resulting in high near-term and continuous long-term warming⁴. To hedge and protect against high-risk outcomes, we identify the geophysical need for a preventive carbon dioxide removal capacity of several hundred gigatonnes. Yet, technical, economic and sustainability considerations may limit the realization of carbon dioxide removal deployment at such scales⁵. Therefore, we cannot be confident that temperature decline after overshoot is achievable within the timescales expected today. Only rapid near-term emission reductions are effective in reducing climate risks.

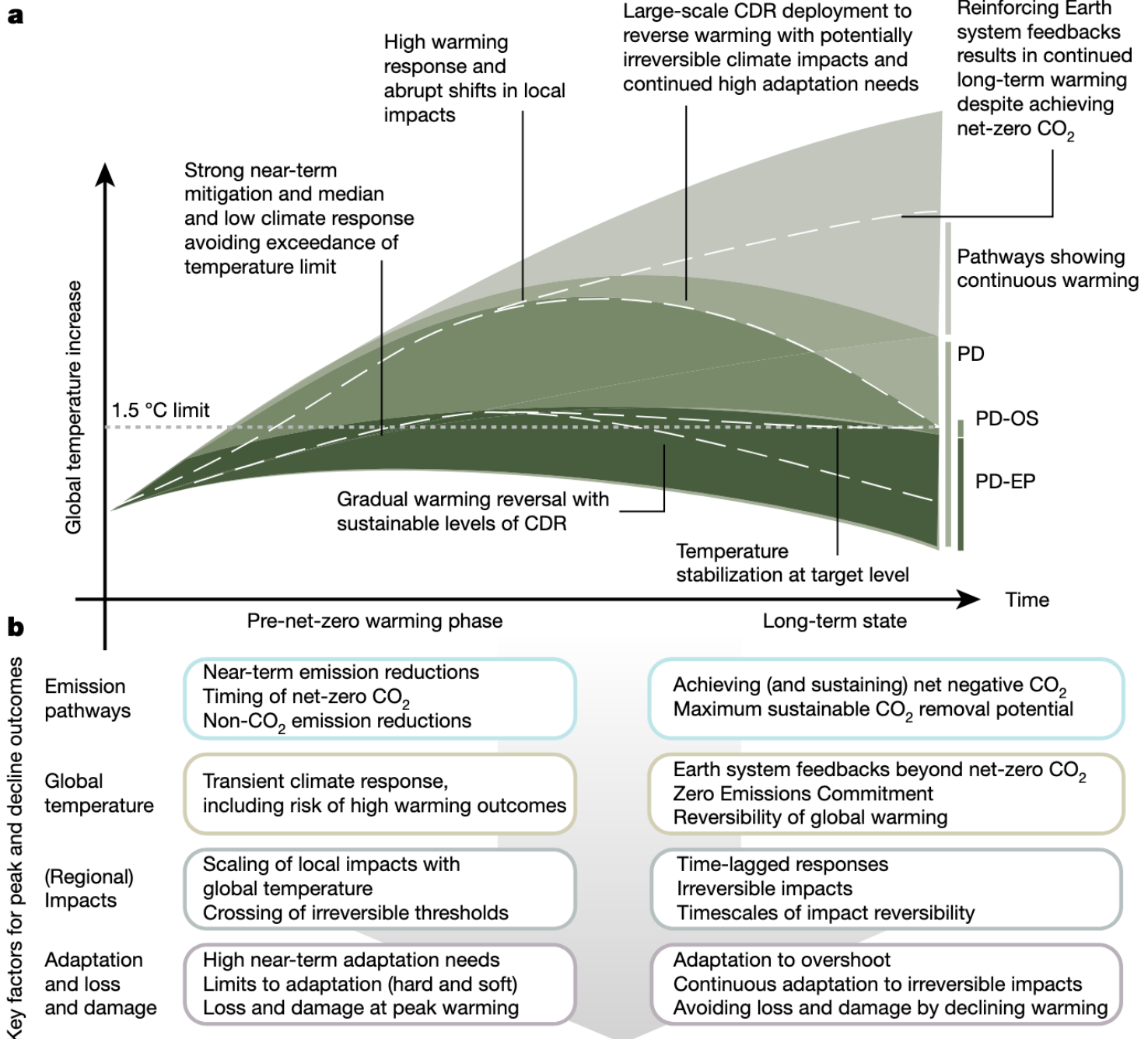
The possibility of surpassing and subsequently returning below dangerous levels of global warming has been a topic of discussion for decades⁶, with large-scale carbon dioxide removal (CDR) identified early on as playing an important part in this temperature reversal^{7,8}. Since the adoption of the Paris Agreement in 2015 the issue has risen to further prominence. The temperature goal of the Paris Agreement allows for some ambiguity in its interpretation but establishes 1.5 °C of global warming as the long-term upper limit for global temperature increase^{9,10}. This means that if 1.5 °C is temporarily exceeded (subsequently referred to as overshoot), a reversal of warming below it is part of meeting the long-term ambition of the Paris Agreement¹¹. The Paris Agreement text does not indicate that temperature must stabilize but instead establishes upper limits below which temperatures must peak and may then decline. This understanding is further strengthened when considering other elements of the Paris Agreement. Achieving global

net-zero greenhouse gas (GHG) emissions, as implied by Article 4.1 of the Agreement, is expected to lead to declining temperature¹². Global GHG emission pathways have a central role in informing the development of policy benchmarks in line with the Paris Agreement and are a core part of climate change assessments by the Intergovernmental Panel on Climate Change (IPCC)¹³. These assessments categorize pathways principally based on their peak temperature outcome¹⁴. Because a peak and gradual reversal of global warming turns out to be a fundamental feature of Paris-compatible pathways¹⁵, we propose to henceforth categorize pathways in terms of their peak and decline characteristics (Table 1).

Peak and decline pathways are differentiated by the stringency of emission reduction efforts in the near term and up to achieving net-zero CO₂ emissions, and the assumed net negative CO₂ emissions in the long term¹⁶. The former determines the maximum cumulative CO₂ emissions of a pathway and thereby approximately the magnitude and time

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Catastrophically warm predictions are more plausible than we thought

The current measures to reduce carbon emissions may not be enough to curb a catastrophically hot future...

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Paul Beckwith video

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network-based constraint to evaluate climate sensitivity

Received: 14 September 2023

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The 2015 Paris agreement was established to limit Greenhouse gas (GHG) global warming below 1.5°C above preindustrial era values. Knowledge of climate sensitivity to GHG levels is central for formulating effective climate policies, yet its exact value is shrouded in uncertainty. Climate sensitivity is quantitatively expressed in terms of Equilibrium Climate Sensitivity (ECS) and Transient Climate Response (TCR), estimating global temperature responses after an abrupt or transient doubling of CO₂. Here, we represent the complex and highly-dimensional behavior of modelled climate via low-dimensional emergent networks to evaluate Climate Sensitivity (netCS), by first reconstructing meaningful components describing regional subprocesses, and secondly inferring the causal links between these to construct causal networks. We apply this methodology to Sea Surface Temperature (SST) simulations and investigate two different metrics in order to derive weighted estimates that yield likely ranges of ECS (2.35–4.8°C) and TCR (1.53–2.6°C). These ranges are narrower than the unconstrained distributions and consistent with the ranges of the IPCC AR6 estimates. More importantly, netCS demonstrates that SST patterns (at “fast” timescales) are linked to climate sensitivity/SST patterns over the historical period exclude median sensitivity but not low-sensitivity (ECS < 3.0°C) or very high sensitivity (ECS > 4.5°C) models.

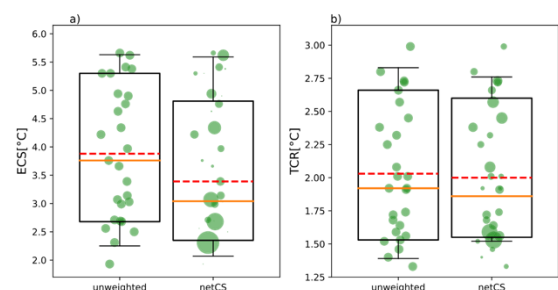
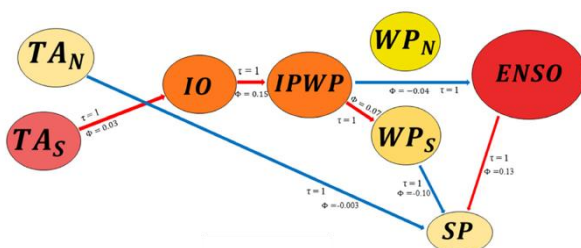
“Climate sensitivity”, or the change in the surface temperature of the Earth under increased emissions of CO₂, is a crucial quantity for climate policy decisions. Two metrics are most often used to express it: the Equilibrium Climate Sensitivity (ECS), which is the temperature response after an abrupt doubled amount in CO₂, and the Transient Climate Response (TCR), which is the response after a transient increase in CO₂ over 70 years. Although the assessed ranges of ECS and TCR are narrower in the latest IPCC report (based on CMIP6 ensemble) compared to the previous one (based on CMIP5 ensemble), thanks to an unprecedented combination of lines of evidence¹, there is no systematic convergence in model estimates of climate sensitivity². ECS distribution derived from CMIP6 ensemble is larger compared to

the one derived from CMIP5 ensemble, with the upper bound of ECS distributions shifting towards higher values³. High values of climate sensitivity imply a much stronger reduction in CO₂ emissions required to avoid drastic and accelerating climate change: the large range of sensitivities by models imply it is highly challenging to develop effective and sustainable policies without further constraining which simulations derive estimates of ECS, TCR are more likely. The range of uncertainty in ECS and TCR is currently thought to be reduced through the usage of an Emergent Constraint (EC), which consists of an explicit and statistically significant linear relationship between a constrained observable⁴ which may be either a trend or a variation in the observational period⁵ (e.g. temperature variability

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CDR State of the Science

There are three challenges of climate change mitigation:

- **Decarbonis3**: turning off fossil fuel emissions
- **Drawdown**: removing excess CO₂ from the atmosphere
- **Dethermalise**: managing excess heat already in the Earth system

This report tells the state of the science for Drawdown or **CDR: Carbon Dioxide Removal**.

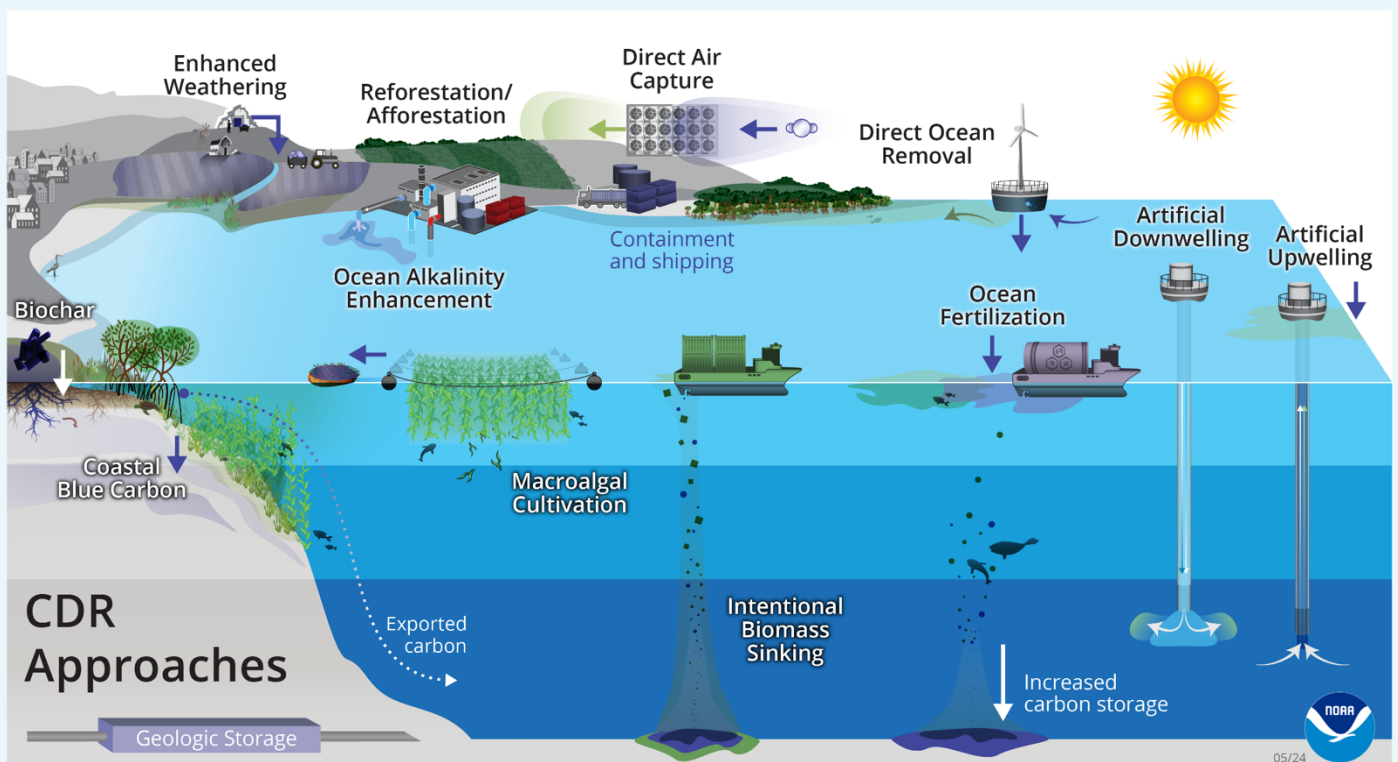


Figure 2. Schematic illustrating land-based and marine CDR approaches.

https://sciencecouncil.noaa.gov/wp-content/uploads/2024/07/CDR-fact-sheet_final_-19July2024-1.pdf



A human-induced version of ocean fertilization can mimic the natural process through which airborne dust can trigger massive plankton blooms that absorb CO₂ and sink it to the sea floor. Such an event took place off the coast of Madagascar. See next page for details.

Phyto & Zoop

Phyto & Zoop is Vita Sapien's name for phytoplankton and zooplankton.



PNAS Nexus, 2024, 3, pgae386

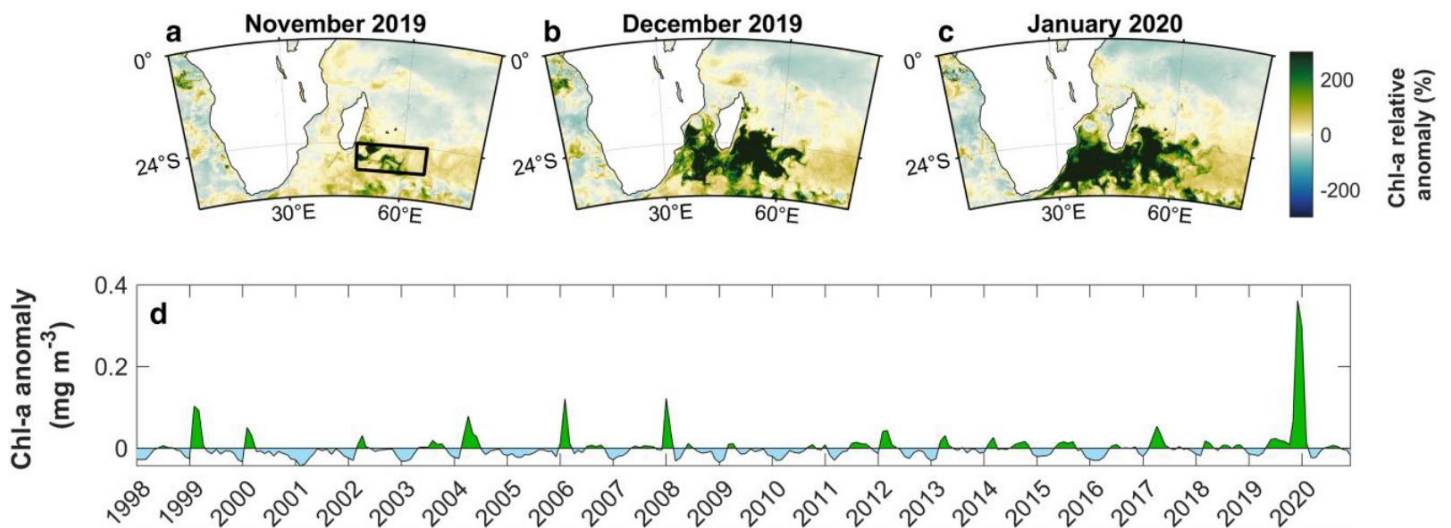
<https://doi.org/10.1093/pnasnexus/pgae386>

Advance access publication 1 October 2024

Research Report

An exceptional phytoplankton bloom in the southeast Madagascar Sea driven by African dust deposition

John A. Gittings ^a, Giorgio Dall'Olmo ^b, Weiyei Tang ^c, Joan Llorc ^d, Fatma Jebri ^e, Eleni Livanou ^a, Francesco Nencioli ^f, Sofia Darmaraki ^a, Iason Theodorou ^a, Robert J. W. Brewin ^g, Meric Srokosz ^e, Nicolas Cassar ^{h,*} and Dionysios E. Raitsos ^{a,*}



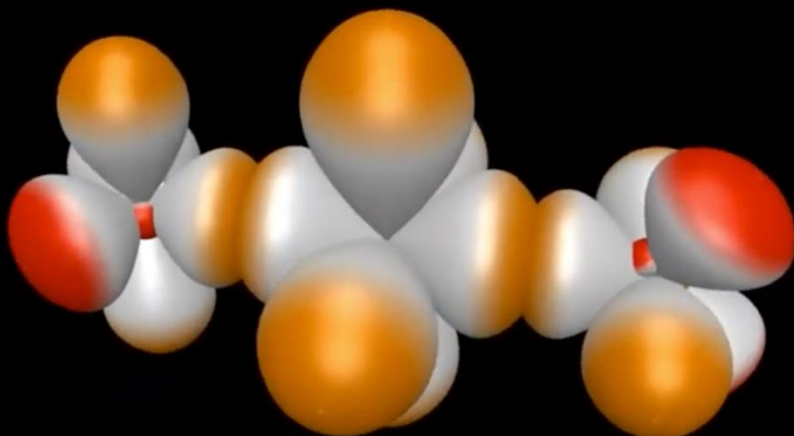
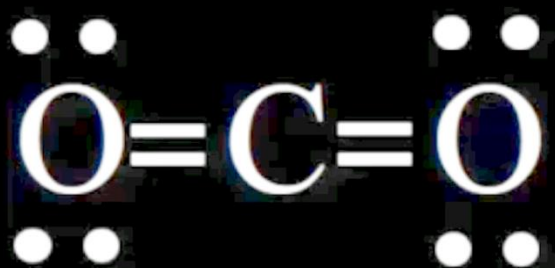
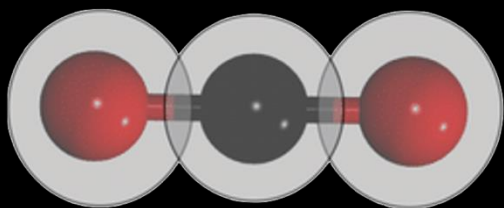
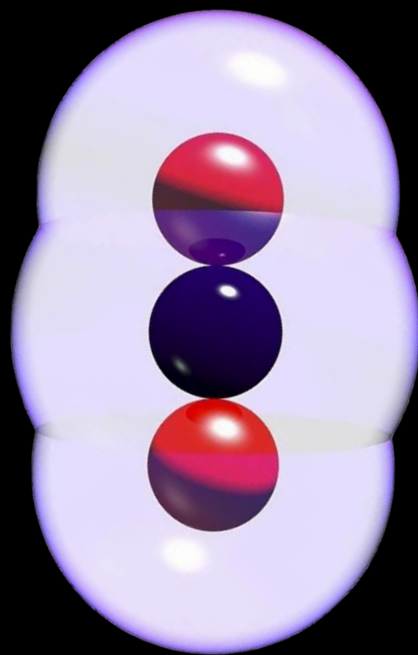
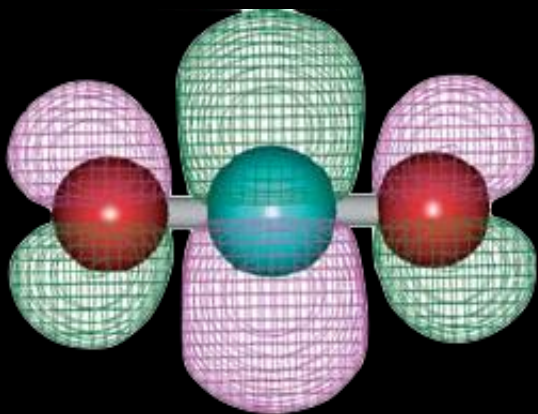
<https://academic.oup.com/pnasnexus/articlepdf/3/10/pgae386/59450895/pgae386.pdf>

Nature feeds the plankton dust.
Humans feeds the plankton microplastic.



Carbon dioxide

Carbon dioxide is a fundamental chemical of life and also the main driver of Anthropocentric climate change. Too much atmospheric CO₂ makes the planet heat-up. Scientists use a variety of symbols to represent carbon dioxide. If you want a blast, watch a youtube video on CO₂ hybrid orbitals.



'Very concerning': BP dilutes net zero targets as global retreat from green standards gathers pace

The oil giant's new focus on fossil fuels signals another defeat for environmental, social and governance aims and has angered campaigners.



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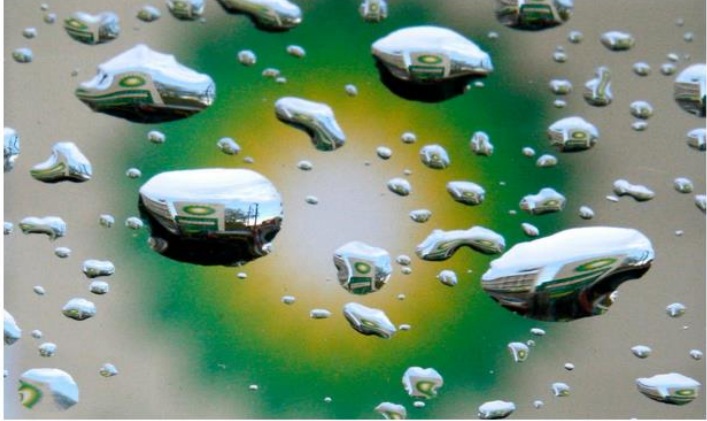
The Observer
Corporate governance

Jillian Ambrose, Julia Kollwe and Kalyeena Makortoff

Sun 13 Oct 2024 17:00 AEDT

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'Very concerning': BP dilutes net zero targets as global retreat from green standards gathers pace



BP said last week it was dropping fossil fuel pledges. Photograph: Luke McGregor/Reuters

The oil giant's new focus on fossil fuels signals another defeat for environmental, social and governance aims and has angered campaigners

In early 2020, Bernard Looney had one clear goal as the incoming chief executive of BP: to convince the world to see the oil company differently. For a time, he did exactly that.


In a glossy, high-concept London campaign launch, the BP boss set out 10 new aims for the company, the most significant being BP's transformation to a net zero energy company by 2050.

Within months, he reinforced the rebranding with a pledge to cut the company's oil and gas production by 40% from 2019 levels by the end of the decade.

At the time, his strategy even won the approval of Greenpeace - a feat few oil executives can boast. But by early 2023, BP had **watered down the 40% cut to a 25% reduction** after the war in Ukraine caused oil prices to surge, doubling the company's profits. Within months, its greenest ever chief executive was **ousted from the company amid revelations about undisclosed relationships with colleagues**. His green plans have followed suit.

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It emerged last week that BP **plans to abandon its curbs on fossil fuel production** in favour of targeting several new investments in the Middle East and the Gulf of Mexico.

The news angered climate campaigners, but surprised very few. BP's green retreat has arguably been the most brazen in the industry - from a grandstanding green agenda to a fresh focus on fossil fuels - but the backtrack from environmental, social and governance (ESG) standards is gaining pace among the world's biggest companies and investors.


The term ESG was first coined by the UN in a 2004 report entitled Who Cares Wins. It provided companies and investors with a model for implementing the ideals of responsible investing in their spending plans.

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Vita Sapien on Doom

Scientists tell us that human civilization has created a climate and ecological crisis that presents an existential threat to our species and most life on Earth. Many people read the science and conclude that it is inevitable that humans will drive themselves extinct.

Vita Sapien Organisation agrees that human extinction is one possible scenario for the future. However, we believe that there is also another possible future: the Verdant Age.



The Verdant Age is the potential future time when humans and the Living Planet thrive in synergy deep into the Long Future. Vita Sapien's aspiration is that humanity thrives a Galactic Year which is about 230 million Earth years.

Is this possible? Yes. Is this future guaranteed? No. Most certainly not. However, what is clear is that the Verdant Age will not be achieved if we view the light at the end of the tunnel as an oncoming train. Instead, we ought view it as the dawn of a new age.

*“To survive is to be fit. To be fit is
to be adaptable to a changing
environment.”*

The world is changing.
Are you adapting?



Falling Upwards October 2024

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Our mission is to foster a global spiritual-movement
for nature.



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