

Post-printing additions

Fall (Autumn): September (22nd), October, November

- **Winter:** December (21), January, February
- **Spring:** March (20th), April, May
- **Summer:** June (21st), July, August

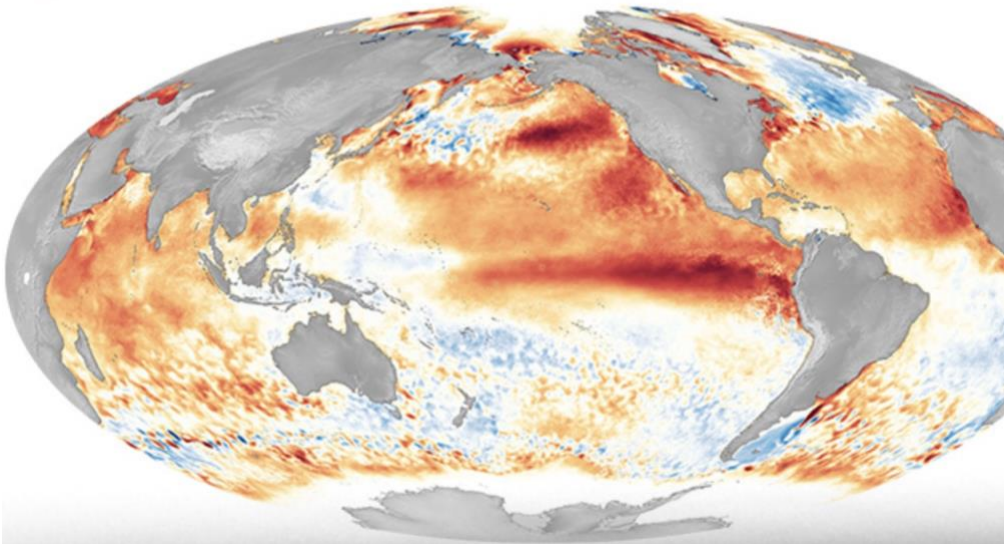
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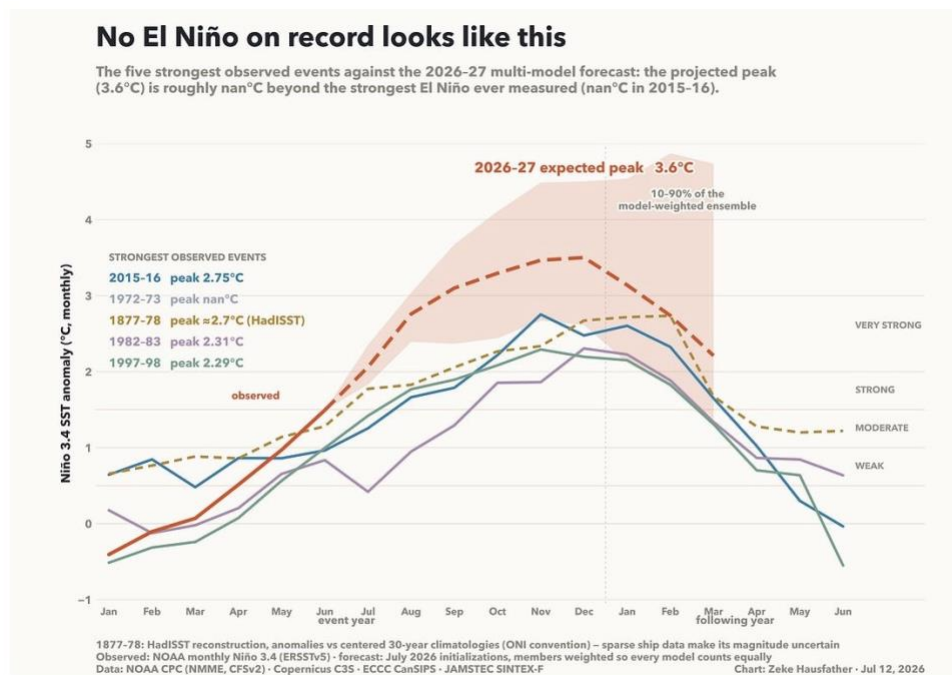
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1. The summer of 2026 saw the Strongest El Nino Ever

This is illustrated in the following illustrations.



This map shows the intensely hot (red) area of the El Niño in the equatorial Pacific.

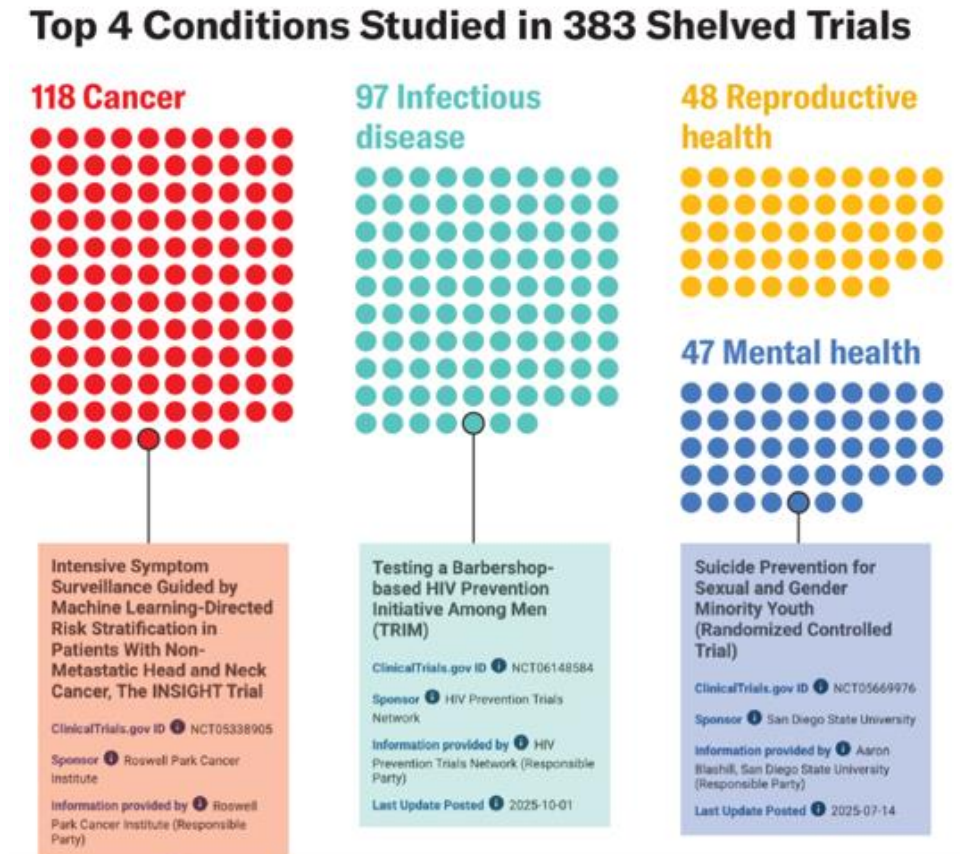


The peak temperature is the highest ever.

El Niño is a natural climate pattern that raises temperatures and disrupts weather around the world. It typically happens when the trade winds blowing east to west over the central Pacific weaken, reducing the upwelling of deep cold water and

2. Canceled Clinical Trials.

RCTs or Randomized Controlled Trials are the "gold standard" for testing the efficacy and safety of a new treatment. The design involves randomly assigning participants to either the experimental group (receiving the new treatment) or the control group (receiving a placebo, or inactive substance). Participants are randomly assigned to different groups to minimize bias and ensure that the groups are comparable at the start of the study. In a double-blind trial, neither the participants nor the researchers know who is receiving the active treatment and who is receiving the placebo. This prevents bias in reporting or evaluating the results.



Carefully designed RCTs guard against the use of testimonial evidence in medical practice, where some patients claim a given treatment was effective for them. During the COVID epidemic this led to claims by Trump 1 and Fox News that Ivermectin could cure COVID. Well-designed RCTs showed it was not effective,

yet many took it when they should be taking drugs such as Paxlovid, that really worked.

Another potential source of error occurs when an under-powered (not enough test subjects) reports that a certain drug works, while a study with many more subjects, is negative.

Now Trump 2 is at it again, this time, again without any real evidence they (Trump and Robert Kennedy Jr.) claim Tylenol taken by pregnant mothers, can cause autism. In a press conference seen by millions he said, “Don’t take it if you’re pregnant. Don’t take Tylenol,” President Trump said, repeatedly emphasizing that pregnant people with fever should “tough it out” as much as they can, despite evidence that uncontrolled fever and infections during pregnancy can themselves increased risk of autism.

The moral of the story is, **don’t take medical advice from politicians who are not physicians and who have a political axe to grind.**

3. California steps in as U.S. skips climate summit

Golden State aims to build on its reputation as a global leader at talks in Belém, Brazil. By Hayley Smith and Melody Gutierrez

Nearly 200 nations are gathering in Belém, Brazil, to kick off the annual United Nations climate policy summit, but there is one glaring exception: **The Trump administration is not sending any high-ranking officials.**

California hopes it can fill the gap. The state, as it usually does, is sending a large delegation to the Conference of the Parties, including first-time attendee Gov. Gavin Newsom and top officials from the California Natural Resources Agency, Department of Food and Agriculture, Air Resources Board, Public Utilities Commission and Governor’s Office of Tribal Affairs.

The state aims to build on its reputation as a global climate leader, sharing its experience with clean energy technology and job creation and showcasing its track record of climate agreements with other countries and regions.

Newsom, who is positioning himself for a 2028 presidential run, told The Times he “absolutely” sees California as a proxy for the U.S. at this year’s conference, which is the main global venue for countries to strengthen their commitments to reducing greenhouse gases.

“California has a responsibility, but also a unique opportunity at this moment, to remind the world that we’re here, that we believe these issues matter, and that there’s an opportunity here to reinforce existing alliances and develop new ones,” the governor said..

California’s strong presence at COP30, which officially begins Monday, also marks an escalation of Newsom’s ongoing battle with President Trump. The two have clashed over immigration and climate, with the president’s energy and environment agenda often targeting the state. **The Trump administration this year canceled funding for major clean energy projects such as California’s hydrogen hub and moved to revoke the state’s long-held authority to set stricter vehicle emissions standards than the federal government.**

But this year’s Nov. 10-21 gathering also comes at a critical moment for the world. It’s the 10th anniversary of the Paris agreement, a seminal treaty signed at the 2015 COP in which world leaders established the goal of limiting global warming to 3.6 degrees Fahrenheit (2 degrees Celsius) above preindustrial levels, and preferably below 2.7 degrees Fahrenheit (1.5 degrees Celsius), in order to prevent the worst effects of climate change.

Most experts and scientists agree that the 2.7-degree target is no longer within reach. The last 10 years have been Earth’s hottest on record, driven largely by greenhouse gas emissions that come from the burning of fossil fuels.

“One thing is already clear: We will not be able to contain the global warming below 1.5 degrees [Celsius] in the next few years,” U.N. Secretary General António Guterres said at a recent gathering of the World Meteorological Organization. “The overshooting is now inevitable.”

The U.N.’s annual Emissions Gap report released in conjunction with the conference finds that **without immediate and aggressive action, the world is on track to warm between 4.14 and 5.04 degrees (2.3 and 2.8 degrees Celsius) over this century. Yet Trump withdrew the U.S. from the Paris agreement on his first day back in office, a move he also made during his first term as president.** In a January executive order he stated that the Paris accord and other international climate compacts pose an unfair burden on the U.S. and steer American dollars to other countries.

The U.S. withdrawal from the Paris agreement is expected to add an additional 0.18 degree to the latest warming projections, in effect nullifying a small gain made since last year, the U.N. report says. It notes that every fraction of a degree of warming means more losses for people and ecosystems, higher costs to

adapt, and more reliance on uncertain techniques to remove carbon from the atmosphere.

However, the report underscores that the technology to deliver big emissions cuts already exists, pointing to **booming developments in wind and solar energy, much of which is occurring overseas**. It's a sector where California can lead, Newsom said, adding that **the Trump administration has "doubled down on stupid"** by ceding so much ground to China. The Golden State has invested heavily in renewables, battery energy storage and the electrification of buildings and vehicles. California has also set ambitious decarbonization targets and reduced its greenhouse gas emissions by 21% since 2000 while its economy has grown 81%.

"We want to continue to tip the scales, and this is about economic growth, this is about jobs, and this is about addressing the other crisis of our time: affordability," Newsom said. "When you talk about energy efficiency, you're talking about affordability. When you talk about wind and solar, you're talking about abundance and you're talking about affordability."

California has already helped to spread a lot of real technology. The state's aggressive emission rules were pivotal in pushing automakers toward electric vehicles, with Toyota largely developing its Prius for California's market. **The state was the first to mandate battery energy storage at its major utilities**, helping jump-start the modern grid-battery market, while its cap-and-trade carbon market program has been emulated in places around the world.

State leaders hope to highlight more than their progress at home. In recent years, California has also forged subnational agreements and partnerships with other regions and countries on issues such as delivering clean transportation, cutting pollution and developing hydrogen and renewables.

Newsom is expected to sign additional agreements at COP this year, although his team declined to provide a preview of what they will entail.

The California Department of Forestry and Fire Protection also has partnerships with several countries that are sharing resources and best practices for managing vegetation and combating wildfires.

Focusing on these actions at the state and regional level has become a key part of COP conferences as the conversation gains urgency and shifts to deployment, according to Rachel Cleetus, senior policy director at the nonprofit Union of Concerned Scientists.

“There is a whole other face of the United States — we have a lot of subnational actors, including leading states and cities and forward-looking businesses, who will be at COP showing the rest of the world that the United States does understand that it’s both in the interest of our country, as well as the global interest, to tackle climate change,” Cleetus said.

“This year, our federal government is totally missing in action ... and the rest of the world needs to understand that America is still in this fight, and we’re moving forward,” Crowfoot said in a briefing.

also focuses on through its 30x30 program to conserve 30% of the state’s lands and coastal waters by 2030, Crowfoot said. The Golden State already has deep ties to the region stemming from its landmark 2019 Tropical Forest Standard program, which set guidelines on carbon credits awarded for reducing deforestation. Still, there is much work to be done.

4. Antarctic glacier’s retreat is fastest in modern history

Tides and glacial earthquakes caused record ice loss at Hektor Glacier
HANNAH RICHTER

In 2022, something shocking happened to the Hektor Glacier, a small river of ice that slips into the sea near the tip of the Antarctic Peninsula.

Over 16 months, it retreated by 25 kilometers, and it lost a whopping 8 kilometers in just two of those months—the fastest glacial retreat in the modern record. Now, after a forensic analysis of the event reported this week in *Nature Geoscience*, researchers say they have identified the worrisome mechanisms behind it: a combination of glacial earthquakes and a swath of thinned ice popping afloat and breaking apart in a geological instant. If the same processes were to occur at larger Antarctic glaciers, they could rapidly accelerate the retreat of ice sheets and raise global sea levels, says Jeremy Bassis, a glaciologist at the University of Michigan.



The study is “telling us that **those worst-case scenarios are maybe not as implausible as some people might have thought.**” To figure out what happened to Hektoria, the researchers first had to establish its original grounding line: the point at which a coastal glacier is no longer attached to bedrock and becomes a floating ice tongue. Using satellite data on the height of the ice surface, as well as images of surface depressions—a marker of thin, floating ice with cracks underneath—they determined that half of the 25 kilometers of lost ice was grounded. Using additional satellite data, the team then worked backward to develop a theory **explaining how both grounded and floating ice retreated.** Their massive, Rhode Island–size, 200-meter-thick slab of ice, Larsen-B broke up spectacularly in 2002, undamming Hektoria, which initially retreated. In the years that followed, sea ice formed and thickened, slowing the glacier and keeping it in place for more than a decade. But at the same time, Hektoria’s ice was stretching and thinning out across the flat bedrock underlying it, forming what’s known as an ice plain. Warmer ocean temperatures, meanwhile, began to prevent sea ice formation in the surrounding Weddell Sea, exposing Hektoria to open seas. When storms sent large waves crashing into its margin in 2022, they cleared out the sea ice and **Hektoria’s 12 kilometers of floating ice broke up into icebergs.** With the buttressing effect of the floating ice gone, Hektoria’s ice plain began to float, periodically rising and falling with the tides **until it lifted fully off its bedrock**

and began snapping apart into smaller icebergs. This process, called buoyancy-driven. A typical iceberg calving event. But at Hektor Glacier, icebergs split off differently, crashing into the remaining glacier and accelerating its retreat.

c/o **CLIMATE CHANGE**

5. PFAS chemicals are 5000 times more potent than carbon dioxide for climate change

A new analysis of Environmental Protection Agency data has revealed that PFAS chemicals – often known as "**forever chemicals**" due to their longevity in the environment – are contributing to the climate crisis as their production involves the emission of potent greenhouse gases.

In recent years, an ever-expanding body of scientific research has shown that per- and polyfluoroalkyl substances (PFAS) are among the most toxic substances widely used in consumer products.

Now the new report shows that one of America's largest PFAS manufacturing plants is also the second largest polluter of the destructive greenhouse gas HCFC-22, which is about **5,000 times more potent than carbon dioxide.**

"This is a sad-but-clear example of how toxic chemicals and climate change are connected: manufacturing PFAS chemicals not only pollutes people and the environment, but releases potent greenhouse gases, adding to the climate crisis," said Erika Schreder, co-author of the report and science director for Toxic-Free Future.

The plant of the PFAS manufacturer Daikin in Decatur, Alabama, **released about 240,000 pounds of HCFC-22 in 2019 – the equivalent of more than 1bn pounds of carbon dioxide.**

6. Something else to worry about - CF4.

As shown above, forever chemicals have a great deal to do with global warming. An article in *Science Focus*, October 2025 was entitled "New Type of acid rain could threaten life on Earth. With a subtitle of "We don't know the long-term consequences of this, but if a long-term consequence occurs, it will occur on a global scale."

At issue is the widespread occurrence of CF₄, a fluorinated compound found in insecticides, pharmaceuticals, and gases used in refrigeration and air conditioning, landfills and sewage. It is the smallest of the Poly-fluoroalkyl substances (PFAS) known as ‘forever chemicals. The following figures show the extent of the problem.

50% = the number of fruits and vegetables in the UK that contain PFAS.

97% = the number of U.S. citizens with PFAS positive blood tests.

1,000 years = the time PFAS can exist without breaking down.

The story was based on an interview with Prof Hans Peter Arp, of the Norwegian University of Science and Technology.

Because of its small size it dissolves easily in water. As a result, it is found in rivers, lakes, groundwater, and the ocean. It is almost impossible to remove from drinking water.

The question is, “Does it harm humans and other living organisms? Some have argued that because of its small size, it passes quickly through the body into the urine. However, Prof Arp said **it can enter cells and become part of the building blocks for lipids, proteins, and cell walls.** He said that until more research is done to determine its threat level, we should do all we can to lower emissions.

Another question is, are **‘forever chemicals related to global warming’?** **The answer is absolutely!!** "Forever chemicals" (PFAS) can act as greenhouse compounds, contributing to climate change, and can be far more potent than carbon dioxide, although their atmospheric concentrations are currently much lower. Their production can emit potent greenhouse gases like HCFC-22.

Global Warming Potentials (GWP100)

Gas	Type	GWP100	Notes
CO ₂	Baseline	1	Reference gas
Methane (CH ₄)	GHG	~30	30× CO ₂ over 100 years
HCFC-22 (R-22)	HCFC	1,810	Ozone-depleting + strong GHG
HFC-134a	HFC	1,430	High GWP but no ozone depletion
HFC-404A	HFC blend	3,922	Very high GWP refrigeration gas

Production and import of HCFC-22 for new equipment is banned in many countries, and existing systems may continue to use recycled or reclaimed HCFC-22 until fully retired. Controlling the emission of ‘forever chemicals’ should be added to the addenda of future COPs.

7. Many Countries have dangerously low fertility rates.

Some have suggested that one way to cut emissions and thus combat global warming is to encourage birth control practices throughout the world. This, however, may not be necessary. Currently, most countries of the world have birth rates well below replacement levels of 2.1 children per couple. The following is list.

1. **South Korea** — 0.72 (record low; only OECD country <1 in 2023). [Reuters+1](#)
2. **Hong Kong (SAR)** — ~0.75 (2023 World Bank / national stats). [Trading Economics+1](#)
3. **Taiwan** — ~0.85 (2023 official / reporting; severe school closures and demographic stress reported). [The Guardian+1](#)
4. **Singapore** — ~0.97 (resident TFR ~0.97 in 2023; long-standing low fertility). [The Straits Times](#)
5. **China** — ~1.0–1.1 (continuing decline since end of one-child policy; large national economic implications). [United Nations+1](#)
6. **Japan** — ~1.25 (~1.2–1.3) (long period of low fertility; marked population aging). [Our World in Data](#)
7. **Spain** — ~1.20–1.25 (Southern Europe: persistent low birth rates and ageing). [Our World in Data](#)
8. **Italy** — ~1.20–1.25 (similar Southern Europe pattern; fiscal stress from ageing). [Our World in Data](#)
9. **Greece** — ~1.30 (post-crisis demographic decline; government concern about costs). [Our World in Data](#)

10. **Portugal** — ~1.30–1.35 (low birth rate and rapid ageing). [Our World in Data](#)
11. **Germany** — ~1.35 (recently classified among EU countries with “ultra-low” fertility; rising median childbearing age). [Financial Times+1](#)
12. **Austria** — ~1.35–1.40 (joined several EU peers in dropping below UN’s “ultra-low” threshold). [Financial Times](#)
13. **Poland** — ~1.32 (Central/Eastern Europe: sustained below-replacement levels). [Our World in Data](#)
14. **Czechia / Slovakia / Hungary** (selected Eastern EU states)— typically ~1.4–1.6 (many EU countries now close to or below 1.5). [Our World in Data](#)
15. **Netherlands / France / UK** (selected Western EU) — many Western European states have TFRs in the ~1.3–1.6 band; still below replacement and pressure on long-term finances. [Our World in Data](#)

These findings show that most countries are more concerned about low fertility ratee than high ones since **low rates can have serious financial consequences including depletion of the labor force, need to shut down schools and hospitals, crashing real estate market, and financial stress from a rapidly aging population.**

Ironically, the one reason the fertility rates are not this low in the U.S. is because of our immigrants – and the Trump administration is trying its best to eliminate that protective factor.

8. The horrible summer of 2026 can best be described by listing some of the headlines across the world.

**Tens of thousands more flee France, Spain fires
Europe battles wildfires amid record heat waves
A Strong El Niño May Be Coming.**

Bracing for a super El Nino
As fires multiply, so does damage to health
200,000 people flee wildfires in France, Spain
Dozens of firefighters have been injured
Brace for lengthy heat wave
Europe battles wildfires amid record heat waves.
Record heat fries Europe's economy.

9. Vector-borne disease rising with climate

By Susanne Rust and Lila Seidman LA Times

Some days it feels as though we're losing a battle against mosquitoes, ticks, fleas, flies and worms.

Lyme disease and Alpha-gal syndrome are expanding their range. Dengue and typhus are increasing. There are still reports of West Nile, Zika and Chikungunya, plus the potential introductions of Chagas and rat lungworm disease. Some of these are contracted overseas, while others are seemingly settling in for the long haul.

"What are we doing to the planet and does that mean we will encounter more diseases?" said Janet Foley, a disease ecologist at the UC Davis School of Veterinary Medicine. "The answer is: yes."

"As temperature rises globally, and as more northern latitudes experience hotter temperatures on average, and more extreme temperatures, some of those pathogens and/or insects that are more prevalent in those parts of the world migrate northward," Willis said. "That is happening."

This year, conditions including a record-smashing March heat wave led to a surge in California's native *Culex* mosquitoes, the transmitters of West Nile virus. Most infections are asymptomatic, but about 1 in 100 involve neuroinvasive disease: meningitis, encephalitis or paralysis. There's no specific treatment.

Another mosquito-borne disease of increasing concern in California is dengue. Also known as "breakbone fever" — the painful, debilitating disease, which can be fatal, is caused by a virus adapted to an invasive, African mosquito known as *Aedes aegypti*.

A recent study in the Lancet Regional Health Americas found that approximately 18.2 million Californians — primarily in the Central Valley, L.A. and San Diego metro areas — live where conditions are suitable for local dengue transmission at least one month a year, usually July or August.

And there's flea-borne typhus, which is also on the rise in Southern California. In 2025, Los Angeles County health officials confirmed 220 cases — a sharp increase over the 187 cases reported in 2024.

The reasons? More of the same. A warmer climate has expanded the flea season. And as people (and their pets) move into areas closer to wildlife, opportunities for the typhus bacteria to jump to people grow.

10. Trump opens Marine Preserves to fishing.

In April 2025, President Trump signed an executive proclamation reopening nearly half a million square miles of Pacific Ocean, coral reef and island habitats to commercial fishing. The order covers the Pacific Islands Heritage Marine National Monument, stretching over Palmyra and Johnston atolls and Kingman Reef, among others.

Soon after, the National Marine Fisheries Service issued a letter to commercial fishermen letting them know the monument was open for business.

The monument was established in 2009 by President George W. Bush, and expanded in 2014 by President Obama. It's frequented by rare and endangered animals such as melonhead whales, Hawaiian monk seals, and hawksbill and green sea turtles.

Trump is targeting the roughly 400,000 square miles of the preserve added by Obama.

This action violates several environmental laws, including the Endangered Species Act.

This is one more example of Trump doing everything in his power to destroy all efforts by prior administrations to protect the earth and environment.

11. Heat waves in the U.S.

This means extra water we put into the atmosphere simply doesn't stick around long enough to alter the climate. By contrast, carbon dioxide stays in the atmosphere to hundreds and even thousands of years.

13. 2026 heat records and deaths

Extreme heat has produced repeated temperature records and substantial mortality in both the United States and Europe.

United States

Current July 2026 heat wave

A broad heat dome has affected much of the country. Billings, Montana, reportedly reached **111°F**, while Salt Lake City reached **109°F**. More than 90 daily temperature records—many involving exceptionally warm nights—were expected to be tied or broken during the current episode. Nighttime temperatures near or above 80°F in parts of the South are particularly hazardous because they prevent physiological recovery from daytime heat.

At least **two dozen deaths** had been reported by July 5, although subsequent compilations placed the provisional toll higher. These are early reports and will almost certainly be revised as death certificates and local investigations are completed. They should not yet be treated as a final national mortality estimate.

June 2026 and the broader record

The contiguous United States averaged **70.6°F in June 2026**, 2.2°F above the 20th-century average. March 2026 had already been the warmest March in the 132-year U.S. record, and April 2025–March 2026 was the warmest 12-month period recorded for the contiguous United States since national records began in 1895.

June 2025 eastern heat wave

New York City ultimately identified **19 heat-stress deaths associated with the June 2025 event**, compared with an average of about seven directly coded heat-stress deaths per year during 2016–2025. The city estimates that approximately **500 residents die prematurely from heat in an average year**, mostly because heat aggravates cardiovascular, respiratory, renal and other illnesses rather than appearing as the principal cause on the death certificate.

National mortality trend

A study using CDC death-certificate data found:

- **1,069 heat-related deaths in 1999**
- **1,602 in 2021**

- **1,722 in 2022**
- **2,325 in 2023**, the highest annual total in the 1999–2023 series

The recorded heat-related death rate increased markedly after 2016. Even these totals are probably underestimates because heat may precipitate a heart attack, stroke or kidney failure without being recorded on the death certificate.

Europe

Late-June 2026 heat wave

The most important current finding is more than **10,000 excess deaths across 27 European countries during the week of June 22–28, 2026**. More than 9,000 occurred among people aged 65 or older. This is an excess-mortality calculation—deaths above the number normally expected—not 10,000 death certificates listing heat as the primary cause.

Germany’s Robert Koch Institute separately estimated approximately **5,120 heat-related deaths**, about 4,270 among people aged 75 or older. England and Wales were estimated to have experienced approximately **2,700 heat-related deaths during the May and June heat episodes**, with roughly 42% attributed to the additional warming caused by human activities. These estimates overlap geographically and temporally with the European total and therefore **must not be added together**.

Western Europe experienced exceptional temperatures and warm nights. Barcelona reportedly reached **40.7°C—105.3°F**, described as its highest temperature in 112 years, while several Spanish locations approached or exceeded 44°C.

Summer 2025

June 2025 was the **warmest June on record for western Europe**:

- Regional average: **20.49°C**
- Difference from 1991–2020 average: **+2.81°C**
- Previous June record, in 2003: **20.43°C**

A rapid attribution analysis of a late-June/early-July 2025 event estimated approximately **2,300 heat-related deaths in 12 European cities**, of which about **1,500 would probably not have occurred without human-caused climate change**. The analysis found that climate change added roughly 2–4°C to temperatures in most of the cities studied. Because this was a rapid analysis rather than a completed continent-wide mortality count, it should be regarded as an estimate rather than a final tally.

Benchmark European summers

Peer-reviewed studies provide more complete estimates for earlier summers:

European summer	Estimated heat-related deaths
2022	61,672 between May 30 and September 4; approximately 62,862 for the full year
2023	47,690

The 2022 study covered 35 countries and more than 543 million people. Italy, Spain, Germany, France, the United Kingdom and Greece had the largest absolute numbers, while Mediterranean countries generally had the highest population-adjusted mortality rates.

What the comparison shows

The most defensible conclusion is not that Europe necessarily has several times more heat mortality per person than the United States. The regions commonly use **different accounting methods**:

- U.S. national figures usually count deaths for which heat is mentioned on a death certificate.
- European studies frequently estimate all deaths statistically attributable to temperatures above the locally optimal level.
- Death-certificate counting misses many deaths recorded as heart disease, stroke, respiratory failure or renal failure.
- Excess-mortality models capture more indirect deaths but depend on assumptions about expected mortality and temperature-response relationships.

Thus, the U.S. figure of **2,325 recorded heat-related deaths in 2023** is not directly comparable with Europe's **47,690 estimated heat-attributable deaths in 2023**.

The strongest common pattern is that **prolonged heat and high nighttime temperatures are becoming especially dangerous**. Older adults account for most deaths, but outdoor workers, people with cardiovascular or kidney disease, socially isolated individuals, and households without reliable air conditioning are also at high risk.

14.Trump cancels protections for endangered species.

By Matthew Brown

One more action by the Trump administration to remove environmental protections

The U.S. Interior Department on Friday canceled a rule meant to protect plants and animals that are determined to be threatened with extinction, **the latest**

step by the Trump administration to dismantle key provisions of the landmark Endangered Species Act at the behest of industry.

Instead of receiving automatic protections, imperiled species will need individualized protection plans once they are added to the threatened species list. That's a potentially lengthy process in which companies could seek exemptions for oil and gas drilling, mining and other development where those species live.

Interior Secretary Doug Burgum said in a statement that the Endangered Species Act had been used for too long "to stop almost any new project in America, driving up costs for families, weakening our competitiveness, and undermining our national security."

A second change finalized Friday requires officials to analyze economic effects when deciding whether habitat is critical to a species' survival. Critics say it gives corporations an opportunity to put their thumb on the scale so officials will allow development in those areas.

"If you're exempting certain industries that cause habitat destruction, in many instances you'll be exempting the main threat to those species," said Noah Greenwald with the environmental group Center for Biological Diversity.

The rules that gave what some consider "blanket protections" to threatened species were first adopted for wildlife in 1975 and for plants in 1977.

There have been no species added to the endangered or threatened lists in Trump's second term. By comparison, more than 20 species were added in Trump's first term, and about 60 under President Biden.

The Endangered Species Act is credited with bringing back animals including the California condor, the bald eagle and the American alligator from the brink of extinction. Burgum noted Friday that 97% of the species that have been given protections still have them.

That's a frustration for Republican lawmakers who say species should be taken off the endangered and threatened lists more quickly once they've recovered.

Brown writes for the Associated Press.

15. Leaders at the Global Climate Summit Highlight the Rising Toll of Warming COP30

By David Gelles and Brad Plumer 2025 NYTimes.

In Spain, intense heat waves and floods have claimed thousands of lives in recent years. In Namibia, higher temperatures have resulted in drought and widespread hunger. And in Haiti, Hurricane Melissa, which was made more violent by global warming, last week killed more than 40 people.

World leaders shared vivid stories about the increasingly severe effects of a warming planet on Friday, the second day of the United Nations climate summit in Belém, Brazil. “Forests are vanishing, water levels are rising and, in turn, peoples’ livelihoods are being disrupted,” Salah Jama, the deputy prime Minister of Somalia, said. “In a nutshell, we are living on a planet in crisis.”

Politicians, diplomats, scientists and business executives are gathering for the event, [known as COP30](#), during another year of record heat and extreme weather that scientists say is being worsened by human-caused climate change.

This week, the United Nations announced that the world was far off-track from keeping global warming well below 2 degrees Celsius, or 3.6 degrees Fahrenheit, compared with preindustrial levels. That was a goal that virtually every country agreed to 10 years ago as part of the Paris climate agreement. [10 Years After a Breakthrough. Climate Pact, Here’s Where We Are.](#)

Has anything really changed in the decade since the Paris Agreement was reached? Actually, quite a lot. Instead, with heat-trapping emissions from the burning of fossil fuels and deforestation continuing to rise, the world is on track to warm by roughly 2.8 degrees Celsius. Scientists have said that every additional fraction of a degree of warming brings greater risks from heat waves, wildfires, drought, storms and species extinction.

The United States is one of the few countries in the world [not](#) attending the summit. President Trump routinely dismisses the threats posed by climate change and is promoting fossil fuels like coal, oil and gas, while penalizing the renewable energy industry.

The environment minister of the small island nation of Tuvalu, Maina Vakafua Talia, referred to Mr. Trump directly. “Tragically, the world’s largest emitter of greenhouse gases has withdrawn from the Paris agreement,” he said. **“Mr. President, this is a shameful disregard for the rest of the world.”**

“All we have to do is look outside our front doors to witness the

impacts of climate change,” Kalani Kaneko, foreign minister of the Marshall Islands, said. “The sea rises, the coral dies and the fish stock leaves our shores for cooler waters.”

In Kenya, millions have been affected in recent years by cycles of extreme drought and devastating floods. “As I traveled here, we’re still searching for scores of people who went missing after a landslide affected one part of our country,” Kithure Kindiki, the Kenyan vice president, said at the summit. “Such incidents have become common.”

Hallo Mustafa Al Askari, the Iraqi environment minister, spoke of the challenges facing a country **where temperatures routinely approach 50 degrees Celsius, or 122 Fahrenheit.** “Water scarcity has become an existential challenge in Iraq alongside waves of drought, desertification and sand and dust storms,” he said. “The crisis threatens biodiversity, agriculture and undermines the livelihoods of local communities.”

And Bernadette Arakwiye, the Rwandan environment minister, spoke of floods in 2023 that killed 130 people and inflicted \$200 million in damages in 24 hours. “This was not an isolated tragedy, but another example of how much damage can be done in one single climatic event,” she said.

COP 30 Coverage The United States is absent from the international talks in Brazil. Other countries are calling for action, showcasing their progress and making new pledges.

At a time when international cooperation is flagging and many countries are more focused on issues like trade and energy security, officials are hoping to use the U.N. summit to direct global attention to the dangers of climate change and the benefits of switching to cleaner forms of energy. “There’s a real focus in these first few days on going back to basics, that climate change is real and it matters,” said Kaysie Brown, the associate director for climate diplomacy and geopolitics at E3G, a European research and advocacy group. “That basic message can’t be taken for granted.” In between the warnings were calls to overhaul the modern economy

Prime Minister Pedro Sánchez of Spain said his country was working with other nations to place additional taxes on premium class air travel and the use of private jets. “This is only fair,” he said. “Everyone needs to pay their due.” He added that he hoped to stop using public funds to finance new fossil fuel projects. Many leaders also called for rich nations to make more money

available to developing countries. “We must reform the current global financial architecture to make capital more accessible and affordable for climate action in the developing world,” Mr. Kindiki, the Kenyan vice president, said.

The pleas for more money come at a time when aid is tough to come by. The amount of financial assistance that rich nations give to poor ones to adapt to storms, heat waves and other perils of climate change dropped 7 percent in 2023, according to the United Nations Environment Program.

A charitable fund for helping poor countries recover from extreme disasters, announced years ago, has not yet raised \$1 billion and is not yet operational. But on Thursday, a new fund for protecting forests that promises financial returns to countries that contribute money raised more than \$5 billion.

The debate over financing also comes as the Trump administration has sought to undermine global climate policies. Mr. Kaneko of the Marshall Islands condemned efforts by nations, including the United States, to scuttle a treaty that would have limited emissions from the shipping industry. “The behavior last month around the International Maritime Organization was shocking,” he said. “It cannot happen again.”

World leaders also used their time to talk about issues beyond climate change. As often happens in international forums, geopolitical rivalries and grievances loom over every discussion, making it more difficult for countries to reach consensus.

Shina Ansari, the Iranian vice president, assailed the attacks on her country this year by the United States and Israel. “This act not only violates international law and constitutes war crimes, but has also caused extensive and lasting environmental destruction,” she said.

Surangel Whipps Jr., the president of Palau, and Mr. Talia of Tuvalu called on Taiwan to be more fully integrated into the United Nations process.

President Xiomara Castro of Honduras took aim at Israel on Thursday, the first day of the summit. “Genocide against the Palestinian people in the Gaza Strip cannot go unpunished,” she said.

Edgars Rinkevich, the president of Latvia, spoke out against President Vladimir V. Putin of Russia on Thursday. “Russia’s

aggression against Ukraine seeks to reshape the global order through conflict,” he said. “It takes human lives and inflicts harm on nature for no good reason.”

And Gustavo Petro, Colombia’s president, on Thursday criticized the Trump administration’s military buildup in the Caribbean. “We have the threat of invasion,” he said. “Invading Venezuela, or maybe threats to invade Colombia, invade Cuba.”

16. As fires multiply, so does damage to health

by Seth Borenstein

Smoke from wildfires — which are burning more of the Northern Hemisphere as Earth warms — **attacks nearly every system in the human body, killing tens of thousands of people a year, numerous medical studies show.**

It attacks the body immediately, spiking asthma cases with increased ambulance runs within hours. It also leaves emergency rooms swamped with people suffering from heart attacks and other cardiovascular and lung issues, as well as mental health issues, doctors and scientists told the Associated Press. Smoke also harms pregnant women, increasing the risk of premature births and low-weight babies who could have breathing problems the rest of their lives, doctors and studies say. And then there are long-term risks involving prolonged exposure to smoke and other air pollution, which has been linked to some cancers and dementia.

After huge global fires in 2018 and 2019, the medical and science communities started looking at the health effects of the smoke, with “more and more studies coming out finding that there’s all types of impacts that may not have been so obvious before,” said Dr. Mary Johnson, an environmental health scientist at Harvard. Smoke causes inflammation by triggering the body’s immune system to go into overtime to fight the irritant. **Scientists have found it can harm the brain, the skin and men’s sperm, with almost no body systems spared, Johnson said. People over age 60 become more prone to stroke,** she said.

“Wildfire smoke is the toxic product of combustion of whatever burned,” which could include houses and cars, said Dr. Courtney Howard, an emergency room physician who is chair of the Global Climate and Health Alliance and president-elect of the Canadian Medical Assn.

“So really it’s a big giant toxic soup of particles and gases.”

Scientists have counted at least 1,000 toxins in wildfire smoke, according to Colorado State University environmental toxicologist Luke Montrose.

“If I gave you a list, you would recognize some of these as being very bad, oftentimes associated with the burning of diesel fuel or cigarette smoke, things like formaldehyde or volatile organic compounds,” Montrose said. “So just the smoke itself can be bad.”

17. Solar surpasses coal in China’s overall power capacity

If the sun were blasting onto all the solar panels in China all at once, the overall electricity output would top that of every one of the country’s coal plants firing at the same time. It’s a major milestone, Bloomberg reported, highlighting just how extensively Beijing has glazed its fields, foothills, and urban rooftops with photovoltaic panels in recent years. But the achievement comes with an asterisk. “No matter how you feel about solar or coal as an energy source, CAPACITY is not ENERGY,” energy analyst Nicholas Birkhead wrote in a post on X. “These solar capacity numbers way overstate the energy mix, which is what matters! I really wish we’d all just publish capacity numbers after they’re adjusted for capacity factor.” In other words: As significant as this seems, China is still burning a whole lot of coal more frequently than the midday sun is shining.

Last year, upward of \$440 billion flowed into solar worldwide, while \$540 billion went to upstream oil drilling. It’s a sign, according to a new report from McKinsey, that “markets are financing both fossil fuels and low-carbon energy simultaneously” and that “the system is not replacing one fuel type with another but rather building them in parallel.”

18. Flash floods ravage Nepal, China. caused by climate change causing melting glaciers

By Niranjana Shrestha and Sibi Aras

UDIN DHUNGA, Nepal — Massive flash floods in a border area of Nepal and China on Wednesday killed at least 160 people and left hundreds of tourists, workers and others missing after sweeping through communities

and bringing travel in some areas to a halt. Experts said an avalanche from a glacier was the likely cause in the warming Himalayan region.

Drone video showed roads destroyed and buildings buried by thundering water the color of wet cement. State news agency Xinhua reported significant casualties.

The region's steep valleys are economic lifelines and travel corridors, but precarious ones when disaster strikes. Images showed what appeared to be the second floors of buildings in Nepal's hard-hit Nuwakot district slathered in mud after the torrent rushed by. Debris hung from tree branches and wires, vehicles were buried and some stunned survivors were caked in mud.

There was little time for anyone to flee.

Many of the missing were on pilgrimage

Officials in Nepal said 403 people, including 341 foreign nationals, were reported missing. Sunil Sharma, a tourism board spokesperson, said 133 were from India on pilgrimage to Mt. Kailash in Tibet, a sacred site for Hindus.

Also missing were 47 from the United States, 34 from Australia, 33 from Britain and 24 from Canada, he said. The State Department said it was aware of Americans affected.

Nepalese police spokesperson Abi Narayan Kafle told the Associated Press at least 28 police officials were missing.

Officials warned residents in several districts to stay away from the banks of the Trishuli, Bhotekoshi and Narayani rivers. At least 19 bridges and nearly 25 miles of road were swept away. The Bhotekoshi flooded around 9 a.m. Wednesday, destroying several villages and hydropower projects, officials said.

The U.S. Geological Survey first reported a magnitude 4.4 earthquake early Wednesday, about 40 miles north of Kathmandu, near the border. The USGS later called the shaking a magnitude 5.2 landslide.

Climate experts at the Kathmandu-based International Center for Integrated Mountain Development said an avalanche from a glacier probably caused Wednesday's flash flood.

"Hydrological observations indicate the exceptional speed and magnitude of the flood wave," they said in an emailed statement, noting that water levels at one point on the Trishuli river rose by as much as 27 feet over half an hour.

He noted the importance of early warnings in "a warming Himalaya."

The region saw similar flash floods in last August, when a glacial lake in Tibet overflowed due to high temperatures. Nine people were killed and crucial infrastructure, including a bridge connecting Nepal and China, was damaged.

The Himalayan region, which spans several countries, including India, is especially vulnerable to heavy rains, floods and landslides because of warming due to human-caused climate change. Research shows that extreme weather events, including heat waves, rains and melting glaciers, have become more frequent.

Researchers in Kathmandu found this year that glaciers across the Hindu Kush Himalayan region are melting at an accelerating rate, with ice loss rates doubling since 2000, primarily due to rising global temperatures and climate change.

Shrestha and Arasu write for the Associated Press and reported from Udaipur and Bengaluru, India, respectively. AP writers Shristi Kafle in Kathmandu, Fu Ting in Washington, Hyung-jin Kim in Seoul and Eileen Ng in Kuala Lumpur, Malaysia, contributed to this report.

19. A global milestone for California solar power

In May, over half of California's electricity came from sun.

By Blanca Begert LA Times

California hit a major milestone in May, generating more than half its electricity from the sun in what is believed to be a global first, according to an analysis of federal data.

California has been trending in this direction for years, but the boom in new battery storage around the state allows it to save solar power when it's overabundant and use it when the sun goes down.

"Battery storage has transformed California's power system," Nicolas Fulghum of Ember, which did the analysis, wrote. "Batteries now shift huge amounts of solar power from midday into the evening peak, which is what allows this level of solar penetration in the system."

Since 2020, the energy provided by battery storage in California has grown from 500 megawatts to 16,000. The amount of solar power being made has also more than doubled, as the state built vast solar farms in the deserts and elsewhere, and incentivized homeowners to install it on their rooftops.

As a result, by 2026, California had about 23,400 megawatts of utility-scale solar capacity, second only to Texas, according to the EIA. When you add in rooftop and other small-scale panels, California had more than any other state, about 43,500 megawatts.

California is still nowhere close to China's buildout of clean electricity. No one is. The country built out seven times as much solar just last year as the total California has installed. The difference is, California's electricity emissions are going down. China's are not yet.

The state has continued its transition, despite strong efforts from the federal government to slow it down.

The massive SunZia wind project in New Mexico also started sending electricity to California in April, reducing the need to burn natural gas for electricity at night.

In July, people in California used more natural gas, which is common as summer temperatures peak.

"Natural gas is the grid operator's generation that will step in when demand starts to rise," Lestina said. "You see a big jump in natural gas as a

percentage of the fuel mix this year starting on July 12, which is when temperatures started to pick up in the West.”

On the whole, however, California is making more clean electricity, and the amount made from natural gas, which generates air pollution and heats up the climate, has been declining over the last few years.

Under legislation signed in 2018, all of California’s electricity is to come from clean sources by 2045.

“Natural gas will continue to fluctuate as a response to grid conditions until we have replaced that with dispatchable resource,” Ackemann said.

20. Heat deaths in Germany and France

The following were some of the headlines in 2026

- **Germany recorded 5,000 extra deaths in June heat wave.**
- **Spain and France also reported tolls in the thousands because of the extreme weather.**

The figures are the latest evidence of the deadly toll of recent extreme temperatures across Europe. Climate change is increasing the frequency and intensity of heat waves on the world’s fastest-warming continent, placing growing strain on health, transport and power systems.

• Heat adds thousands to France’s expected deaths

France registered its hottest-ever days on June 24 and June 25 this year — with a national average of 86 Fahrenheit — as well as record heat at night and peak temperatures that soared well above 104 in many places.

All told, across Europe, extreme temperatures that hit exceptionally early and hard this year saw well over 10,000 more deaths at the height of the heat wave than would normally have been expected, according to figures that are still emerging across the continent.

Funeral service directors in Paris said they struggled to find places to store bodies before burial or cremation, with some mortuaries saying they were full and having to turn bodies away.

• **Tens of thousands more flee France, Spain fires** The latest wildfires in southern Europe last week have displaced more than 250,000 people, including some 70,000 who were evacuated in central Spain.

21. Cheap batteries are taking over world's power grids.

Around the world, a wave of mega installations of batteries are lining up to be connected to the grid this year — from solar hubs in Texas to grasslands in inner Mongolia and the site of a former coal plant north of Sydney.

Falling costs and soaring energy demand from data centers had already set the stage for rapid growth. The war in the Middle East has helped accelerate the trend by lifting demand for alternatives to expensive fossil fuels, setting 2026 up to be the year batteries become influential in the global energy system. Bloomberg NEF analysts had already expected installations to jump by about a third this year, led by expansion in Europe, the Middle East, Africa and Latin America. That momentum could build further if fuel disruptions persist.

In markets flooded with solar and wind — technologies that have been built out significantly since the last energy crisis in 2022 — battery operators can buy electricity when it's cheap and sell it when demand peaks. **Where grids once relied on coal and gas when renewable output dipped, storage technology is now becoming cheap and fast enough to make a difference in how the grid functions. Average costs have dropped by around 75% from 2018 to 2025, according to BNEF, and are expected to tumble an additional 25% through 2035.**

Power demand is going up, data centers are coming online, more renewables are getting built, coal is exiting,” he said. “So when you combine all those things, the need for storage is going up.

22. Heat extremes are getting more extreme

Heat, sea level rise, polar melting: They’re all picking up pace

By Eric Roston and Hayley Warren

Much of the U.S. just sweltered through intense heat waves, putting strain on power grids and prompting the cancellation of many events. In Europe, punishing temperatures pushed thermometers as high as 111 degrees Fahrenheit in France, as wildfire tears through swaths of the country.

A troubling pattern has emerged in this summer’s heat: Not only has it broken records, it’s done so often by margins far above the previous all-time highs.

These heat jumps are part of a larger shift. Sea levels are rising and polar ice is melting faster than before, while new records for daily rainfall are being set at a rapid clip. **The pace of global warming itself has quickened in recent years.**

Although scientists have long braced for climate change, the growing severity of its impacts is shocking them.

Today’s climate can “seem like an unexpected step change” from that of a few years ago, said atmospheric scientist Katharine Hayhoe of Texas Tech University.

Climate models from decades ago have proved prescient, closely aligning with what the mercury later showed: heat increasing around the planet, caused primarily by humans burning fossil fuels.

As the global average temperature rises gradually, changes on the ground can be abrupt and dramatic, hurting people and damaging property. Especially during El Niño weather phases, one of which began in June and is set to bring months of misbehaving weather.

El Niños exacerbate the heating brought about by greenhouse gas pollution and can cause billions of dollars in direct economic damage from flooding, crop losses, wildfires and civil unrest. **The indirect costs reach trillions in lost gross domestic product.**

Some models suggest this El Niño could push warming briefly as high as 2 degrees Celsius. The world is currently 1.4 degrees Celsius above pre-industrial levels.

Scientists have long warned that change will not be smooth.

“Far from being self-stabilizing, the Earth’s climate system is an ornery beast which overreacts even to small nudges,” wrote the late Wallace Broecker in 1995, two decades after he coined the term “global warming.”

One of the most dramatic spikes came in September 2023. The monthly average temperature worldwide overshot the previous September record by 0.5 degrees Celsius — the biggest such margin ever and extreme, even for an El Niño year.

Satellites can see heat building up. They take a very direct and useful measurement of global warming: How much sunlight is entering the atmosphere, and how much heat is radiating out to space? **The deficit between those two things is a measure of the warming, and it has doubled in recent years.** “An anomaly which has clearly caught us off guard,” wrote the authors of a May 2025 estimate of the Earth’s energy imbalance.

The extra energy trapped in the system seems to be the result of the planet reflecting less sunlight back to space. That’s partly the result of bright-white ice turning into darker, heat-absorbing sea water. **But the bigger concern is that reflective, low-lying clouds may be going missing.**

The energy imbalance “suggests that the models may also be under-predicting future warming,” said Phil Duffy, chief scientist of Spark Climate Solutions, a nonprofit that identifies and helps limit climate risks. “We don’t know that to be true, but we need to get to the bottom of what’s going on.”

A sure sign of unprecedented weather is that people get creative when they're dealing with it or describing it.

Pavements and building surfaces in Paris became so blistering in late June that locals reported cooking crêpes canicules (“heat-wave crepes”) on their window ledges. Arctic wildfires that churn all winter long and reignite in the spring have been christened “zombie fires.” September 2023’s heat was dubbed “absolutely gobsmackingly bananas” by Berkeley Earth’s Zeke Hausfather.

“We could call them super-extremes or mega-extremes,” said Tim Lenton, chair in climate change and Earth system science at the University of Exeter in Britain. “We’re starting to see extremes on a spatial scale and a magnitude that’s really surprising.”

There were four times as many heat records set from 2016 to 2024 as there would have been without climate change. Unprecedented rainfall occurs 40% more often than it otherwise might, and record dryness, 10% more. Meanwhile, record cold is on an extinction pathway, according to a 2025 review of extreme weather.

“Extreme events are so far outside anything we have expected,” said Friederike Otto, an Imperial College London climate scientist and co-founder of World Weather Attribution.

A recent paper shows that even at 2 degrees Celsius of warming — less than the world is on track for by 2100 — some areas can experience extremes of heat, rain, drought and wildfire that are worse than average effects that were expected at 3 or 4 degrees Celsius.

“That warmer world, where it’s all risk all the time, that transition to that world — that’s what we’re in right now,” said Justin Mankin, a climate scientist at Dartmouth College who didn’t work on the paper.

The potential future of harbors in New York, London and Shanghai is locked away, at least temporarily, in Greenland and Antarctic ice sheets and mountaintop glaciers. As they melt, the water joins the global ocean lapping up to ports and coasts worldwide.

Difficulty modeling how ice sheets melt meant years of scientists underestimating sea level rise. Today, projections are rising because ice sheet dynamics are better understood — **and because they're melting faster.**

Water takes up more volume as it warms. This “thermal expansion” is one of the main contributors to higher seas. **The world's average sea level has risen more than 8 inches since 1880 and could rise up to 6.5 feet by the end of the century.**

Another major contributor is ice melting and flowing to the ocean. Melted ice makes up more than half of the higher sea level. The rate of melting has more than doubled from the period 1976-95 to 2006-25, according to an annual report on climate indicators.

Greenhouse gas emissions are “the main driver,” stated the most recent IPCC science report. The future rate of emissions will determine the amount of melt and sea level rise for millennia.

Greenland has steadily lost ice at the rate of 264 gigatons every year since 2002, with mountain glaciers in ranges such as the Himalayas and the Andes losing slightly more.

West Antarctica loses ice as warming water melts glaciers at the ocean floor. Other parts of the continent, mostly the northeastern coast, still gain ice from snow but not enough to compensate for the shrinking ice sheets. The place that may draw the most concern is the Thwaites Glacier. Rolling Stone magazine in 2017 dubbed it the “Doomsday glacier” for its potential contribution to sea level rise, both directly and because it's an ice cork holding back inland ice sheets.

The Thwaites already contributes 4% of sea level rise and is melting five times faster than it was in the 1990s. It would take a few centuries for all of it to melt, but that alone could add several centimeters to seas by 2100.

One of the planet's major ocean currents, the Atlantic Meridional Overturning Circulation, conveys warm, salty surface water northward, where it cools, sinks in northern seas bounded by lands from Canada to Norway, and begins the southbound leg of its circuit.

The AMOC not only keeps rising waters in check along the U.S. East Coast. It delivers an enormous amount of heat to the North Atlantic, and consequently to northern Europe, which draws from the AMOC about a third as much heat as it receives from the Sun. The current also helps stabilize precipitation around the world.

All that could be in jeopardy if the slowdown in the AMOC — measured by the U.K. National Oceanography Centre — were to lead to collapse, a growing concern among some experts.

As recently as 2021, the IPCC expected the conveyor to weaken this century as freshwater accumulates in the North Atlantic amid warmer water, but called a shutdown by 2100 “very unlikely.” Studies since then have largely borne out the conclusions, with one line of research flagging the potential for change much sooner.

There’s no consensus yet on if or when the AMOC might halt, and scientists are investigating whether parts of the system may make it more resilient than some projections suggest.

Stefan Rahmstorf of the Potsdam Institute launched his career in the 1990s researching the North Atlantic currents. In the last five years, he said, his estimate of the chance that the AMOC would weaken dramatically this century rose from 5% to more than 50%.

“In all other areas in society, we have a very different approach to risk,” he said. “If you want to build a bridge or a nuclear power plant, you accept maybe a one-in-10,000 risk of a bad accident happening. Whereas with the AMOC, I’ve for decades warned that a 5% risk, as we saw it then, is too high. And now we’re talking more like 50% or more.”

Carbon dioxide emissions have stayed fairly flat since 2013. They’ll need to drop to zero before the CO₂ in the atmosphere stabilizes, but if that happens, warming will stop too. Key to driving them down is a global shift to carbon-free energy sources — and in recent years, these have become cost-competitive with fossil fuels. Combined solar and battery systems can now supply electricity more affordably than gas in many places.

Solar is the fastest-growing power source worldwide, making up 75% of new demand growth last year. Bloomberg NEF expects solar to produce more

power than any other source by 2032. Solar and wind power, batteries, electric vehicles and heat pumps are gradually making regions and countries less dependent on oil, gas and coal. Price spikes from the wars in Ukraine and Iran are helping to make the case.

The data suggest a global energy transition with strong momentum, although not without headwinds. A solar supply glut combined with trade barriers means panel production has fallen for the first time in 20 years. The Trump administration has reversed policies that supported renewable power and EV adoption and is cracking down on climate observation and research as well.

Even with more ability to tame warming than ever before, a hotter, more extreme future is guaranteed, and the next phase of climate change is likely to be marked by learning how best to respond.

“That’s the hard part for managing climate change today,” said Sarah Kapnick, global head of climate advisory at JPMorgan Chase & Co. “People are grappling with how to translate the science into usable information for decision-making in their personal life, in their work life, for their community,” she said. “And that is, I think, where we’ll see the growth of knowledge and capability in the coming years.”

Roston and Warren write for Bloomberg.

23. One hot day can really hurt you.

As climate change intensifies, many are learning that the effects of heatstroke aren’t always temporary or reversible

By Emma Court and Zahra Hirji

After an hour or two of running sprints and drills on the track with fellow high school volleyball hopefuls, Rebecca Ochoa realized she couldn’t see straight. It was a hot August day in Texas, and they’d had only limited water breaks. The coaches at Madisonville High School urged Ochoa to do one more lap. The 13-year-old stumbled forward and collapsed, her body overwhelmed by the heat.

Ochoa had experienced **heatstroke, the most dangerous form of heat illness**, and it wreaked havoc on her body. She developed a severe related condition called rhabdomyolysis, in which muscles break down, and doctors were concerned about possible kidney damage. She was hospitalized for about two weeks.

That was 11 years ago. “I am still not the same as before this happened, physically or mentally,” Ochoa said. “I constantly battle dehydration, fatigue, nosebleeds, and even passing out during the warmer months.” She never returned to volleyball.

Extreme heat has been linked to half a million deaths worldwide each year. It’s one of the leading causes of weather-related deaths in the U.S. and contributes to more than 100,000 emergency department visits in the country annually. But many people still think of heatstroke as a short-term event: You overheat, then you cool off. It’s true that the damage depends on how quickly and thoroughly the person suffering can be cooled. But for those fortunate enough to survive, recovery can be far from straightforward. And as climate change increases exposure to dangerous heat, more people may encounter the grim truth Ochoa already knows: The effects aren’t always temporary or reversible.

“There are people that, unfortunately, barely survive heatstroke and then they’re paralyzed or disabled for the rest of their life,” said Rebecca Stearns, chief operating officer of the Korey Stringer Institute, a nonprofit named after a Minnesota Vikings player who died of an exertional heatstroke in 2001.

Heatstroke occurs when the body heats up and can’t cool itself down. A warming world is putting more people at risk. About 40% of children worldwide now experience an extra month of heat stress a year because of climate change, more than other age groups, according to a study published this week in *Science Advances*. Because their bodies are still developing, children may be especially vulnerable to long-term effects from heat exposure.

Heatstroke can cause confusion, dizziness, headaches and loss of consciousness. People can recover well, experts say, so long as their body doesn’t remain at dangerous temperatures for too long and they receive

proper cooling. When this doesn't happen, "the membranes of the cells start to come apart and everything just starts to fail," said Debra Hendrickson, a Nevada pediatrician who wrote a book about how climate change threatens kids' health. "That's why you start to see organ damage — the brain, the heart, the kidney, the liver."

Research has found that going without cooling really increases the chance of complications. Heat exposure has been linked to chronic kidney disease among young farmworkers.

William Martinez, 34, once worked in the sugarcane fields in and around Chichigalpa, Nicaragua. "We saw how our families, fathers and uncles cut sugarcane, fell sick, and eventually died of chronic kidney disease," he said through an interpreter. "Our thought pattern was, 'We're going to cut sugarcane, fall sick and die.' " He now works with the nonprofit La Isla Network to protect workers from heat illness.

No two cases of heatstroke are the same, and there's no single path to recovery. Patients should spend the first two weeks resting and undergo bloodwork to track how key organs like the liver and kidneys are functioning and monitor for signs of potentially life-threatening muscle breakdown, Stearns said. If all is well, they can begin low-intensity activities in a cool environment, gradually working up to higher-intensity exercise in the heat.

To determine whether patients are ready to ramp up, the Korey Stringer Institute administers a two-hour walking test. The pace is relatively slow, but the conditions are extreme: 104-degree heat and 40% humidity. Testers monitor whether participants' heart rate and body temperature remain stable, including whether their temperature stays below about 101, according to Stearns.

Access to structured recovery can vary dramatically. Members of the military and sports teams typically have the most resources, while people exposed to heat through jobs such as construction or farmwork may have far less support.

Ryan Swoboda had access to some of the best recovery resources — and even for him, getting back to normal took months. In 2017, at 18, he collapsed in the heat at a football practice for freshmen on his third day at the University of Virginia. His temperature reached 109 in the ambulance. He

was placed in a medically induced coma for three days and hospitalized for 19. It took about four months, he said, before he began to trust his body again.

The incident didn't just change Swoboda's approach to heat — it also changed UVA's. In the immediate aftermath, Swoboda recalled, the school expanded use of its core-temperature monitoring during football summer training. More significant, he says, it “empowered athletic trainers to pull players who showed signs of heat illness.”

Even people who appear to recover from heatstroke may face health complications later on. A 2018 study that tracked survivors of classic heatstroke found that 12 years later they had 3.5 times the rate of ischemic heart disease, the most common form, compared with people without a history of heat illness. Another study linked heatstroke to increased risks later on of heart attack, other heart problems and kidney disease.

Court and Hirji write for Bloomberg.

24. EV growth persists despite federal curbs

By Hayley Smith

Trump has eroded California's emissions rules, yet nearly 1 in 6 new cars sold are electric.

The federal government is working to slow the transition to EVs and promote a fossil fuel future for America.

President Trump has taken dozens of steps to erode California's ability to get there. They include eliminating the federal tax credit for people who purchase EVs and repealing the basic finding that greenhouse gases are dangerous, which forms the legal basis for regulating vehicle emissions under the Clean Air Act.

Last year, the Trump administration revoked California's long-held authority to set stricter vehicle emission standards than the federal government — an authority that has been granted to the state since the 1960s. The White House also overturned California's electric vehicle sales target, which would have

required automakers to sell an increasing percentage of zero-emission vehicles over the next decade.

“What the Trump administration did is put things on its head,” said Gil Tal, director of the Electric Vehicle Research Center at UC Davis. The actions didn’t just adjust the nation’s EV agenda, he said — “they did a U-turn.”

The state is also seeing lots more people buying used EVs, and lawmakers have approved millions in state incentives to replace lost federal rebates.

Federal interference threatens that momentum and the state’s ability to meet federal air quality standards, putting public health at risk for millions of Californians — especially those in the most polluted communities.

A growing network of chargers

The availability of charging stations also plays a huge role in how fast people buy electric vehicles, and California now boasts more EV chargers than gasoline nozzles, according to the Energy Commission. **The state has more than 216,000 publicly available EV chargers**, meaning they’re not in an employee garage that requires a badge or in a gated apartment complex.

But last year, the Trump administration abruptly froze new funding for one of the key sources of help for new public chargers — the National Electric Vehicle Infrastructure, or NEVI, program — while it rewrote the rules. **California and other states sued to challenge the freeze, and a federal judge ruled the administration had acted unlawfully.**

California’s expansion of chargers continued anyway. Of the 806 new public fast-charging stations added nationwide in the second quarter of this year, roughly 1 in 7 were in California — by far the most of any state, according to a report from Paren, an EV charging data and analytics platform.

California is also a leader in utilization, with fast chargers in use a healthy 23.1% of the time, second only to Washington, D.C., and Hawaii, according to Paren. And “California pairs a top-tier rate with by far the largest footprint” of fast-charging ports, about 17,400, the report says.

25. Global warming sidelined as key election topic

By Nicholas Riccardi, Jennifer McDermott and Leah Willingham

During President Trump's first term and especially during the Democratic primaries to determine who would run against him in 2020, Democrats spoke constantly about climate change. They used it to rally young voters, fueling protests and sweeping demands to remake the economy with proposals such as the Green New Deal.

But there has been a national shift in the conversation that is sharp enough for some researchers to coin the term “**climate hushing**” to describe it. The Searchlight Institute, a Democratic think tank, urged the party to stop mentioning climate **change because it is not a priority for voters**. The Sunrise Movement, a left-wing group that pushed global warming as a top issue for young people, switched its mission in the fall to a broader mandate of fighting the Republican president.

The shift was encapsulated by the Democratic primary for U.S. Senate in Massachusetts on Tuesday as the incumbent, Ed Markey, 80, fended off a challenge from U.S. Rep. Seth Moulton, 47. Markey still talked about sponsoring the Green New Deal but focused more on other issues to burnish his left-wing bona fides and prove to voters that he is not too old for the job.

It was the latest example of how climate change has been eclipsed by issues such as affordability, U.S. support for Israel and, above all, how to confront Trump.

Even if the political discussion on climate change has quieted, the planet has not. Scientists say there is an increasing chance that 2026 could be the hottest year on record,

U.S. Sen. Sheldon Whitehouse of Rhode Island, a prominent Democratic voice on climate change, said in an interview that **ignoring the issue is a major strategic “blunder.”**

“Climate change has moved from the science department into the economics department,” he said. “It’s now battering people’s home insurance, property values, pocketbook concerns. So I think it’s a very powerful argument.”

About 6 in 10 Democrats say climate change is “a very big problem” for the country, according to a Pew Research Center poll from April. That is roughly the same as in 2016. Still, climate has often taken a back seat to other issues in Democratic voters’ priorities, such as inflation, healthcare affordability and the role of money in politics.

It contended that voters saw it as such an intimidating, complex issue that Democrats were more likely to win by focusing on other subjects — thus enabling them to regain power and tackle the crisis that they were not talking about.

Leah Stokes, a political scientist at UC Santa Barbara and author of “The Carbon Wave,” a book about Democratic President Biden’s domestic agenda, said it was “galling” when politicians made the issue less of a priority.

“The climate crisis is accelerating and we can’t really not talk about it for like a decade, because the planet will be even more on fire if we do that,” she said.

Anthony Leiserowitz, director of the Yale Program on Climate Change Communication, agreed with those concerns.

“What happens over the course of the next decade will profoundly shape the habitability of the planet for literally thousands of years to come,” he said.

Some turn climate into an affordability issue

Climate has come up as part of the national backlash to data centers, but it is only one part of the conversation about the projects’ effect. Many climate advocates are adjusting how they talk about the issue, stressing how green energy can lower prices and ease insurance costs.

26. In Trump era, the news self-censors climate coverage

David Helvarg Contributing writer Contributing writer

What you don't see in much of the TV coverage, at least not since the beginning of President Trump's second term, is any mention of climate change. Without that link, to hear people like ABC's David Muir on "the most watched newscast in America" ask network meteorologists to explain the conditions — but never the causes of their nightly footage of burning, flooding landscapes and traumatized people — is excruciating.

This self-limited reporting on the American networks — in sharp contrast with the BBC and other international TV news outlets, as well as some print and digital publications in the U.S. — also runs counter to an increasingly robust science that can now attribute to what degree climate change is driving individual extreme weather events including floods, droughts, fires and storms. Until very recently, many scientists said this was simply not possible — and climate change skeptics continue to emphasize the uncertainty of causation in specific disasters. But the accuracy of this "attribution science" is confirmed in a newly released report from the National Academies of Sciences, Engineering, and Medicine.

Instead of adding this information to their reporting, however, news outlets like CBS and the Washington Post (both owned by Trump supporters) have fired their climate reporting teams. Even National Public Radio, as part of its cutbacks, has gotten rid of its chief climate editor along with its climate team.

If fearfully reduced media coverage of an expanding crisis with warlike casualty figures isn't bad enough, many establishment Democrats are now practicing "climate hushing" in response to Trump's pro-oil climate denial, playing down the disasters around us this summer to avoid a backlash in November's midterm elections, on the logic that swing voters are more likely to be alienated by climate talk than won over.

The brutal early-summer heat dome over Europe led to a wave of excess deaths across 27 countries, according to European sources — estimated at 10,000 to 14,000 killed. A similar heat dome is now breaking records across the U.S. from Bismarck, N.D., (105 degrees) to Miles City, Mont. (115 degrees). This as wildfire smoke from Canada and Minnesota blankets much of the nation. Such pollution is thought to contribute to nearly 16,000 deaths

each year, according to a 2024 Yale study. Texas is experiencing its second summer of torrential rains and deadly flooding.

The West Coast is facing a marine heat wave similar to the one that began in 2013 and killed off 95% of Northern California's kelp forests in a blow to the industries and cultures associated with them. At the same time, 85% of the world's coral reefs continue to experience heat-related bleaching. The National Oceanic and Atmospheric Administration reports the ocean is the hottest it's been since accurate measuring began in the 19th century. This is resulting in increased coastal disasters such as Super Typhoon Bavi, which hit Guam and another U.S. territory, the Northern Mariana Islands, on July 5 before killing dozens of people in the Philippines.

We're losing a climate war that we should, by now, be winning. With technological advances, global market forces have shifted dramatically in favor of a rapid transition off fossil fuels to now cheaper, cleaner solar, wind and other carbon-free energy systems.

While all nations are hurt by the U.S.-Israeli war on Iran — and the blockade of oil tankers in the Strait of Hormuz — those like China and Spain that have already invested in the clean energy transition have suffered less from oil and gas interruptions. Meanwhile, the Trump administration has promised a French company a billion U.S. taxpayer dollars to cancel its offshore wind projects along the U.S. East Coast and pledge to invest instead in oil drilling (and spilling and global warming).

Coal and oil were great energy systems for the 16th and 19th centuries. But we know how to do better for less today. We don't have to continue overheating our planet or leave deadly floods and choking wildfire smoke as this generation's legacy. The only thing stopping us is politics. By defending democracy and using its tools, we the people can still win the climate war — even if today's politicians and TV networks won't admit it's happening.

David Helvarg is the executive director of Blue Frontier, an ocean policy group, and co-host of "Rising Tide: The Ocean Podcast." He is the author of "Forest of the Sea: The Remarkable Life and Imperiled Future of Kelp."

27. Climate's role seen in bigger El Nino punch

By Hayley Smith LA Times

For decades, scientists have struggled to understand the potential link between global warming and El Niño — and whether human activity is making the already powerful climate phenomenon even more extreme and disruptive.

Evidence of a connection has remained elusive, however, as El Niño is notoriously variable, making it difficult to distinguish long-term changes from its natural ebb and flow.

But now — as this year's "super" El Niño gains strength — some researchers say they are getting closer to unraveling the mystery.

A study published recently in the journal *Science* examines temperature data from more than 900 years of coral records from the Galápagos and suggests that El Niño's have become much stronger since people started warming the planet through fossil fuel emissions.

"Prior to the industrial era, we don't see evidence for periods where the El Niño system is as strong as it is in the most recent decades," said Julia Cole, a paleoclimatologist at the University of Michigan and the study's lead author. The swings between warm and cold conditions that define El Niño "were much stronger in the last 40 to 50 years than they were prior to warming."

The research arrives as experts and officials warn that the current El Niño, which began forming in June, is shaping up to be the strongest ever experienced by a considerable margin. It is developing faster than the previous historic super El Nimos of 1997-98 and 2015-16, and is already on track to far exceed historical temperature thresholds.

On Thursday, the World Meteorological Society issued a new El Niño forecast warning that there is a nearly 100% chance it will continue through February, prolonging its effects.

"El Niño is being supersized before our eyes," read a statement from United Nations Secretary-General António Guterres. "The science leaves no room

for doubt: the planet is in uncharted waters, and those waters are heating up. Sea surface temperatures are rising, temperatures keep climbing, and the world is in the danger zone of extreme weather.”

El Niños are periods of temporary warming in the tropical Pacific that develop every two to seven years. When they arrive, they trigger widespread changes in weather and climate around the world, from punishing heat waves to dangerous floods and severe droughts. In Southern California, El Niño is associated with warm and wet conditions.

According to authors of the recent study, modern El Niños are about 36% stronger than they were before the start of the industrial era in the mid-1800s, and show a “striking amplification” of about 16% in the last 40 years. El Niño’s strength is primarily measured by how much warmer the sea surface temperature in the tropical Pacific region is than normal.

To be sure, scientists have not yet conclusively established that humanity’s burning of fossil fuels is increasing or intensifying El Niño.

“This is another piece of evidence in an ongoing scientific debate on the role of climate change in El Niño events,” said Zeke Hausfather, a climate scientist at Berkeley Earth who was not involved in the study. “It won’t necessarily settle it, but it’s more weight on the side of the scale for a detectable climate impact.”

The ramifications of a direct connection would be serious. Not only is El Niño a leading driver of climate and weather hazards, but it also imposes “tremendous economic costs, ecological damages, and human suffering globally,” according to the Science study. That includes droughts, floods, infrastructure damage, coral bleaching, wildfires, and agricultural and health effects.

Notably, the study did not find that climate change is worsening the other half of the El Niño Southern Oscillation system — La Niña. If anything, it is making ENSO’s variability “kind of lopsided,” Cole said, meaning that the change in variability leans toward stronger warm events than cold ones.

Uncovering these mechanisms has been a challenge, she said, in part because very few people live in the remote part of the ocean where El Niño forms, and “nobody was out there sticking a thermometer in the water every week”

over the centuries to create a historical record. It wasn't until scientists started receiving satellite data in the 1980s that a complete picture of El Niño began to emerge.

So Cole and her colleagues turned to the coral.

Coral can live for decades or centuries, and they form a skeleton of calcium carbonate layers as they grow, kind of like rings on a tree. By measuring aspects of their chemistry — the ratio of strontium to calcium and the relative abundance of rare and common oxygen isotopes — the researchers could determine the ocean temperature in which the coral grew down to a specific month, Cole said.

That allowed them to chart temperature data from the Galápagos dating back almost 1,000 years. The Galápagos sit right where eastern Pacific El Niño events have some of their strongest effects.

Though they didn't have coral samples for every year of the last millennium, the data they generated “have this really unequivocal signal in them, and we thought it was really important to get them out there,” Cole said.

The findings may not settle the debate once and for all, but they “definitely” show an increase in El Niño's variance in the modern era, said Art Miller, an oceanographer at Scripps Institution of Oceanography who was not involved with the study.

He said the findings are consistent with the appearance of several unusually large El Niño events in the last three decades — namely, 1997-98, 2015-16 and the one gaining strength now.

They also align with observable warming in the ocean and atmosphere, which are potentially affecting El Niño's dynamics, he said. In fact, this year's El Niño is developing against the backdrop of unusually warm ocean temperatures, including a record-breaking marine heat wave in the Pacific Ocean that is providing a hotter baseline for the system.

“Since the equatorial zone of the ocean in the western Pacific was loaded with heat, it was primed for triggering an El Niño,” Miller said. But the connection is something of a two-way street: Although the heat wave helped instigate El Niño in the spring and summer, El Niño is expected to feed

warmth back toward the West Coast as it develops, keeping coastal waters warmer than usual in the fall and winter, he said.

Other researchers were more skeptical about the coral study's findings. University of Pennsylvania climate scientist Michael Mann noted in a post on Bluesky that other factors, such as volcanic and solar activity, could explain patterns seen in the coral record.

For his part, Hausfather cautioned that there are “pretty big uncertainties when you are working with indirect measurements like coral proxy records,” so comparing historical El Niños with modern ones is inherently hard to do.

What's more, “even if the authors are correct about the climate change link, that doesn't mean that every single El Niño event will be a strong one,” he said. “El Niño is still largely driven by natural variability, which means that some individual events will be strong and some weak.”

Cole, the lead researcher, agreed. The findings don't mean that every El Niño will be stronger than the last in a warming world, she said — nor would that be realistic given how unpredictable El Niño can be.

But even if some are weaker than others, the data indicate they are unlikely to revert to preindustrial levels anytime soon, she said. The coral records show essentially “no overlap” in El Niño's behavior between the modern era and the time before human-caused global warming, she said.

“There's all kinds of ways that El Niño can change,” Cole¹ said. “But this current strong event is consistent with the shift that we saw that says big strong events are going to be more common.”

¹ Cole JE, Dunbar RB, McClanahan TR, Muthiga NA. Tropical Pacific forcing of decadal SST variability in the western Indian Ocean over the past two centuries. *Science*. 2000 Jan 28;287(5453):617-9.

28. Ranchers Against big oil.

In the Rocky Mountains, years of extreme heat and drought have baked the landscape, drying up streams that feed the Colorado River and desiccating pastures where cattle graze.

The unrelenting dryness has brought hardship upon cattle ranchers, who say their livelihoods increasingly are under threat.

As the U.S. Supreme Court considers a case in which major oil companies are being sued for the effects of global warming, a group of Colorado ranchers is voicing support for the idea that the fossil fuel industry should be held to account.

“It’s affecting us directly,” rancher Caleb Valdez said. “I hope the lawsuit holds the largest contributors accountable for the consequences.”

The Supreme Court case stems from a lawsuit the city and county of Boulder, Colo., filed against Suncor Energy and Exxon Mobil in 2018. It argues that the **oil companies have for decades concealed and misrepresented the dangers of fossil fuels** and that they should help pay the rising costs of more intense wildfires, drought and heat waves, among other problems linked to climate change.

The defendants have appealed to the Supreme Court in hopes of blocking the lawsuit, which they say threatens to create financial chaos for their industry, among other issues.

The group of seven ranchers filed a friend-of-the-court brief supporting the city and county, saying they are “living through the impacts of anthropogenic climate change that scientists have warned about for years,” and that rising temperatures driven by the use of fossil fuels threaten “the economic viability of a way of life that has been central to communities for generations.”

Their public stand is unusual. Many western ranchers are skeptical about climate science and remain unconvinced that global warming is a major driver of drought and shifting weather patterns.

But for Valdez, who owns about 200 cattle in southwestern Colorado, the connection is clear.

The ranchers depend on snowmelt that feeds the Colorado River and its tributaries to nourish grasses and hay pastures for their herds. But this year the Rockies had the least snow on record, and they've watched springs dry up and creeks dwindle.

The lack of water has ravaged grasslands and left ranchers unable to grow enough hay, forcing them to buy feed for their cows at high prices.

It's been so dry that Valdez no longer can get water in his irrigation system for his animals to drink. He has turned to buying water and hauling it with a tanker truck to fill troughs for the cows.

"My livelihood is directly dependent on the environment," he said. "Increasingly inconsistent weather patterns — including hotter summers, mild winters and a lack of summer moisture — make an already dynamic and complex job more unpredictable and difficult to navigate."

The stakes are high not only for small ranchers like him but also for the nation, he said.

"If we end up going out of business," he said, "that's not good for the country. ... It's not good for food security."

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In their lawsuit, the city and county say **the financial damage caused by climate change is immense.**

"Colorado's economy depends on snow, water and cool weather," the plaintiffs said in their complaint. "For example, the state's \$41-billion agriculture industry is imperiled by rising temperatures and drought, while the \$5-billion ski industry is in jeopardy as a result of 'low-snow' winters and shorter seasons."

They said local taxpayers should not have to "pay the full costs of all that is needed to attempt to mitigate the harm."

Last year, Colorado's Supreme Court ruled in Boulder's favor, finding the case can proceed under state law.

Then Suncor and Exxon Mobil appealed to the U.S. Supreme Court, arguing that federal law precludes such claims in state courts "for injuries allegedly caused by the effects of interstate greenhouse-gas emissions on the global climate."

The companies said in a recent brief that nearly 60 other local governments and states have brought similar suits, and that damages in any single case "could reach into the billions."

"Giving even a single jury the power to impose ruinous liability on selected members of the energy industry is a recipe for chaos," the companies said in the document. "Unleashing juries nationwide is a recipe for disaster."

The Supreme Court is scheduled to hear arguments in Suncor Energy vs. County Commissioners of Boulder County on Oct. 5. Its ruling could affect dozens of other pending lawsuits by cities and states against oil and gas companies.

The ranchers decided to write an amicus brief after seeing that eight counties were setting aside money to write a brief in support of the oil companies.

Deirdre Macnab, a rancher in northwestern Colorado, was outraged when she read in her local newspaper that leaders of Rio Blanco County would back the oil companies. She enlisted six other ranchers to join the legal brief and tell the court how climate change is affecting them.

"It's really important for the Supreme Court, and the public, to know that ranchers are extremely concerned and under tremendous pressure," she said. "It's pushing many people completely out of ranching, and many people have had to significantly reduce their herd sizes."

Rancher Jay Fetcher said that with climate change, the snow is melting much earlier in the spring on his high-elevation pastures. He worries about what will happen as global temperatures continue to rise.

“Are those little streams that we’ve relied on all these years going to change so that there’s no water for the cows?” he said. “Then what do I do?”

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The ranchers point out in their legal brief that average temperatures have climbed 2.3 degrees since 1980 in Colorado, and that since 2000 the Southwest has been plagued by a megadrought that has dramatically reduced the flow of the Colorado River.

The river’s reservoirs have declined to their lowest levels on record.

“The West is being dewatered in this entire climate crisis,” said Kathleen Kelley, whose ranch burned last year in one of the largest wildfires in Colorado history. “We are all vulnerable.”

The flames also came close to Macnab’s ranch. She said fossil fuel companies need to help mitigate the disasters and pay for the harm to communities.

Macnab likened this climate case to the successful series of lawsuits against big tobacco companies in the 1990s.

“We’re in an urgent crisis,” she said. “And the **fossil fuel companies have got to come to the table and be part of the solution**, and they have to be held responsible.”

To deal with the water shortages along the Colorado River, others have suggested policies that encourage farmers to grow less hay — which consumes nearly half the water diverted from the river. At the same time, the drought has driven hay prices higher.

Cattle and other ruminant livestock contribute to climate change by releasing methane as they digest plants. Having humans eat less meat is one way to reduce emissions of greenhouse gases and benefit the environment, researchers and climate advocates have suggested.

But the Colorado ranchers insist that with their land-management practices, they are benefiting the ecosystem, nourishing the soil and capturing carbon in their grazing lands.

“I hope ranchers will be recognized as part of the solution to climate change,” Valdez said.

They also say consumers can help reduce transportation emissions by buying beef from local producers.

Kathryn Bedell, a veterinarian who owns a small ranch near Grand Junction, sells her beef directly to customers. But with the water shortage leaving a dearth of forage grass and hay, she said it’s getting much harder to earn a living. Buying hay for the animals to last through the winter would be expensive. So around the end of October, she plans to sell most of her herd, about 70 animals.

“I’ve seen climate change with my own eyes,” she said. “Climate change is bankrupting ranchers.”

29. \$177 billion in U.S. grants cut or frozen.

By Mike Catalini Associated Press.

The Trump administration has cut or frozen up to \$177 billion in federal grants since the president took office for his second term, according to a tracking tool released Wednesday by a pro-democracy nonprofit and a group of researchers and scientists.

The cuts affected all 50 states and the District of Columbia, with health, nutrition, the environment and disaster relief making up the largest share of cuts, the States United Democracy Center and Grant Witness organization found.

Among the grants that were eliminated, frozen or delayed were ones related to maternal health in Michigan, education research in Mississippi and assistance to minority farmers in Iowa, the researchers found. California, Texas, New York, Illinois and North Carolina saw the highest amounts of interrupted grant money. The tracking tool is called Lost Funds.

“By bringing thousands of funding disruptions from the Trump administration together in a publicly accessible, verified database, Lost Funds puts the magnitude of their impact on full display,” Scott Delaney, co-founder of Grant Witness, said in a statement.

The \$177 billion finding represents nearly 10% of federal discretionary spending, the groups said.

The tracker’s organizers said the disrupted grants were beyond the kind of cuts that typically happen when administrations change.

“Lost Funds shows the extraordinary scale and real human impact of these disruptions, and how states are once again on the front lines protecting their residents,” said Kelly Rader, States United Democracy Center’s research director.

In some cases, courts have ruled against the administration’s grant funding cuts.

The new tool, which is being made available for public use, relies on data from USASpending.gov, an open data source of federal spending information.

Grant Witness is a group of scientists, researchers and attorneys who document how funding is changing under President Trump’s administration.

30. August Ties the Record for Earth’s Hottest Month

By Raymond Zhong Reporting from London Sept. 9, 2026

Last month tied July 2023 as the planet’s hottest month on record, European scientists said on Thursday, as human-caused warming pushes the Northern Hemisphere’s muggiest, most uncomfortable time of year into new realms of stickiness and discomfort.

Dangerous heat hammered Europe for the fifth time since May. Temperatures soared into the triple digits across the southern United States from California to Texas. South Korea recorded its highest temperature

reading in modern history: 108.5 degrees Fahrenheit in the southern city of Yangsan on Aug. 2.

August tied the record for the oceans' hottest month in history as well, scientists said, as El Niño conditions caused warm water to accumulate at the surface of the tropical Pacific. This extra warmth will spread to the rest of the planet in the months ahead, making the globe's average temperatures likely to break more records through the end of the year and into 2027.

“These observations show how climate change is driving extremes across both the atmosphere and the oceans,” said Samantha Burgess, a climate scientist at Copernicus, the European Union's climate monitoring service, which published the analysis of August temperatures. “The impacts of these conditions are increasingly being felt by communities, economies and ecosystems across the world.”

August's sweltering temperatures capped the warmest summer on record for both Western Europe and the contiguous United States. Across the lower 48 states, the average temperature last month was 75.6 degrees Fahrenheit, the highest on record for August and 3.5 degrees Fahrenheit above the 20th-century average, the National Oceanic and Atmospheric Administration said on Wednesday.

Summer in the Northern Hemisphere is also the warmest time of year for the planet as a whole. The reason is that the sun's energy heats the air above land more than it does the air above water, and most of Earth's land lies north of the Equator.

According to Copernicus, the average air temperature at the planet's surface last month was 1.65 degrees Celsius, or roughly three degrees Fahrenheit, higher than it was at the start of the industrial age, when large-scale burning of fossil fuels began raising global temperatures.

That made August the first month since last November when global warming exceeded 1.5 degrees Celsius, an important number in humanity's efforts to curb climate change.

More than a decade ago, nearly all nations agreed at a global summit in Paris to try to keep global warming “well below” two degrees Celsius and, ideally, to limit it to 1.5 degrees Celsius above preindustrial levels.

In [a report last week](#), the United Nations declared that the world would not achieve that second, more ambitious goal and predicted that, within the next few years, average global warming would surpass 1.5 degrees Celsius. By 2100, warming could peak at 1.8 degrees Celsius if governments are highly successful at slowing warming, or at 2.6 degrees Celsius or higher if they aren’t, the report said.

The goal now, the U.N. report said, should be to bring temperatures back down as quickly as possible, both by slashing greenhouse gas emissions and by developing novel technologies **to draw carbon dioxide out of the atmosphere**. The world also needs to learn to cope more effectively with the elevated risks of intense hot spells, downpours, wildfires and coastal floods that a warmer planet has created, the U.N. said.

“This is the spiraling price of humanity’s fossil fuel addiction, and the global climate crisis it is fueling,” said Simon Stiell, the head of the U.N. entity that supports the international response to climate change.

Chico Harlan contributed reporting.

31. Big Tech risks climate pledges for AI

By Matt Day and Mark Chediak

The gas-hungry plants being built for AI are set to hugely increase U.S. carbon emissions. Data center developers are turning to bespoke natural-gas power plants in a development that promises to dramatically increase carbon emissions and make it harder for U.S. technology companies to meet their lofty climate goals.

Ninety-nine proposed plants tracked by BloombergNEF would emit about 318 million metric tons of carbon dioxide annually if run at industry-standard rates, according to a Bloomberg News analysis. The entire

U.S. electric power industry emitted about 1,485 million metric tons of carbon last year, according to Energy Information Administration data, meaning one slice of data center infrastructure has the potential to lift U.S. power sector emissions by 20% — and as much as a third should the new plants run flat-out.

ming.”

Day and Chediak write for Bloomberg.

32 Sodium ion Batteries

By Blanca Begert

Sacramento joins safer batteries scene

Peak Energy will be first in the country to make sodium-ion batteries, an alternative to lithium-ion, on a larger scale.

The lithium-ion batteries that supply much of today’s clean energy come with some infamous drawbacks, including fire risk and reliance on foreign mining.

Alternatives have been slow to get off the ground.

But California startup Peak Energy announced Wednesday it’s building a factory in Sacramento that will be the first in the U.S. to make sodium-ion battery packs at commercial scale.

Sodium-ion batteries have long held promise. They are made from cheap and abundant sodium ash deposits. The materials are less prone to overheating, so they don’t have the fire risk of lithium.

But they also store less energy per cubic inch. That means they have to be bigger and heavier, which makes them harder to fit into electric vehicles. So far, they’ve struggled to compete.

Peak Energy thinks it has an edge. The company focuses on storage systems big enough to power large data centers, factories and whole segments of the grid, where battery size matters less.

The company already delivers battery packs out of a small pilot project in San Francisco, but it has gotten \$1.1 billion in preorders and now needs more space.

CEO and co-founder Landon Mossburg said its first products, each about the size of a shipping container, will begin rolling out in early 2027.

“We’re a 3-year-old company with over a billion in deposit-backed customer contracts, we’ve got grid deployment already, and all those products are exceeding expectations on the grid,” said Mossburg said. “Those are really great signals.”

He founded Peak after working at Tesla and the now-folded Swedish battery company Northvolt. The battery cells, which make up the systems, will come from China.

Customers for Peak who have put down a deposit include independent power providers Jupiter Power, Energy Vault and RWE Americas, who are connecting utilities, and increasingly data centers, with batteries.

Peak also works directly with utilities, including one unnamed customer in California, and is “in fairly advanced discussions with two of the major hyperscalers,” Mossburg said.

Not everyone is so optimistic about the technology. Lithium-ion batteries are still cheaper, at least up front.

“Sodium-ion batteries attracted considerable interest when lithium-ion battery prices surged in 2022,” said Isshu Kikuma, an energy storage analyst at BloombergNEF.

Since then, he noted, those prices have come down. And as with lithium-ion battery chemistry, Asian manufacturers already have an edge.

“Sodium-ion cells are currently exclusively manufactured on a commercial scale within China,” said Evan Hartley, a research manager at the

Benchmark Mineral consulting firm. Large producers such as BYD and CATL are spending enormous amounts to research and develop new products, he said.

Other U.S.-based sodium-ion startups have floundered of late. Natron Energy canceled plans to produce sodium-ion battery cells in North Carolina last year after funding difficulties. Bedrock Materials, which was making sodium-ion batteries for EVs, also closed up shop, citing a bet on a lithium supply shortage that hadn't panned out.

But Peak Energy's model is different, Mossburg said. Unlike Natron, it won't be trying to make the batteries that go into their systems at first. They'll import them, initially from China and later from other countries in Asia.

"While working at Tesla, I saw the advantage of focusing on a great end product that customers want before you try to bite off more of the scope," Mossburg said.

Last month, Peak announced a partnership with General Motors to develop their own cells. Once up and running, Peak Energy's Sacramento factory will make three to four battery systems per day, each filled with almost 8,000 battery cells. One system can power hundreds of homes for four hours, Mossburg said.

Customers will deploy tens or hundreds in a single project, "basically creating a power-plant sized battery" that can store power and supply the grid when energy is expensive, or directly serve facilities like data centers.

Although sodium-ion batteries cost more than lithium ones, Mossburg said Peak Energy's battery systems still save customers money: The technology does not heat up like lithium, so it eliminates the need for expensive cooling technology.

"Because lithium-ion needs to actively cool, you're basically paying to refrigerate your batteries or using energy to refrigerate your batteries, and we don't need any of that stuff," Mossburg said.

The upshot is a battery that's cheaper, quieter and safer.

“Safety is a major advantage for sodium-ion batteries,” Kikuma said.

That could matter in California, where battery opposition has surged after a fire at a Moss Landing energy storage facility drove the evacuation of 1,200 residents and contaminated nearby wetlands.

California has typically been a hub of battery research and development, not manufacturing. Mossburg said Peak Energy, which also has offices in Colorado, chose Sacramento for its proximity to a talented workforce, a growing energy storage market and the company’s engineering teams in Burlingame. He said the factory would create 239 new jobs.

The company hasn’t received any federal clean energy tax credits, but it got a \$10.5-million tax credit from the state of California.

While sodium-ion is likely to remain a small fraction of the global battery market, Kikuma said stationary energy storage is one of the fastest growing applications for sodium-ion batteries.

Mossburg sees Peak as being ahead in this corner of the market.

“Everybody from CATL to GM have sort of validated now what we’re doing,” he said. “The market is trying to catch up.”

33. In Trump era, the news self-censors climate coverage

David Helvarg Contributing writer Contributing writer

Along with ongoing coverage of the latest bombings and missile and drone attacks in Iran and the oil-rich Gulf states, extreme weather events are also providing lead segments on evening news programs this summer. **What you don’t see in much of the TV coverage, at least not since the beginning of President Trump’s second term, is any mention of climate change.** Without that link, to hear people like ABC’s David Muir on “the most watched newscast in America” ask network meteorologists to explain the conditions — but never the causes of their nightly footage of burning, flooding landscapes and traumatized people — is excruciating.

This self-limited reporting on the American networks — in sharp contrast with the BBC and other international TV news outlets, as well as some print and digital publications in the U.S. — also runs counter to an increasingly robust science that can now attribute to what degree climate change is driving individual extreme weather events including floods, droughts, fires and storms. Until very recently, many scientists said this was simply not possible — and climate change skeptics continue to emphasize the uncertainty of causation in specific disasters. But the accuracy of this “attribution science” is confirmed in a newly released report from the National Academies of Sciences, Engineering, and Medicine.

Instead of adding this information to their reporting, however, news outlets like CBS and the Washington Post (both owned by Trump supporters) **have fired their climate reporting teams. Even National Public Radio, as part of its cutbacks, has gotten rid of its chief climate editor along with its climate team.**

If fearfully reduced media coverage of an expanding crisis with warlike casualty figures isn’t bad enough, many establishment Democrats are now practicing “climate hushing” in response to Trump’s pro-oil climate denial, playing down the disasters around us this summer to avoid a backlash in November’s midterm elections, on the logic that swing voters are more likely to be alienated by climate talk than won over.

The brutal early-summer heat dome over Europe led to a wave of excess deaths across 27 countries, according to European sources — estimated at 10,000 to 14,000 killed. A similar heat dome is now breaking records across the U.S. from Bismarck, N.D., (105 degrees) to Miles City, Mont. (115 degrees). This as wildfire smoke from Canada and Minnesota blankets much of the nation. Such pollution is thought to contribute to nearly 16,000 deaths each year, according to a 2024 Yale study. Texas is experiencing its second summer of torrential rains and deadly flooding.

The West Coast is facing a marine heat wave similar to the one that began in 2013 and killed off 95% of Northern California’s kelp forests in a blow to the industries and cultures associated with them. At the same time, 85% of the world’s coral reefs continue to experience heat-related bleaching. **The National Oceanic and Atmospheric Administration reports the**

ocean is the hottest it's been since accurate measuring began in the 19th century. This is resulting in increased coastal disasters such as Super Typhoon Bavi, which hit Guam and another U.S. territory, the Northern Mariana Islands, on July 5 before killing dozens of people in the Philippines.

We're losing a climate war that we should, by now, be winning. With technological advances, global market forces have shifted dramatically in favor of a rapid transition off fossil fuels to now cheaper, cleaner solar, wind and other carbon-free energy systems.

While all nations are hurt by the U.S.-Israeli war on Iran — and the blockade of oil tankers in the Strait of Hormuz — those like China and Spain that have already invested in the clean energy transition have suffered less from oil and gas interruptions. Meanwhile, the Trump administration has **promised a French company a billion U.S. taxpayer dollars to cancel its offshore wind projects along the U.S. East Coast and pledge to invest instead in oil drilling (and spilling and global warming).**

Coal and oil were great energy systems for the 16th and 19th centuries. But we know how to do better for less today. We don't have to continue overheating our planet or leave deadly floods and choking wildfire smoke as this generation's legacy. The only thing stopping us is politics. By defending democracy and using its tools, we the people can still win the climate war — even if today's politicians and TV networks won't admit it's happening.

David Helvarg is the executive director of Blue Frontier, an ocean policy group, and co-host of "Rising Tide: The Ocean Podcast." He is the author of "Forest of the Sea: The Remarkable Life and Imperiled Future of Kelp."

34. Climate Denial Moved to the Treatment

By Ingmar Rentzhog *We Don't Have Time*

As climate disasters intensify, many governments are retreating from climate action instead of accelerating it. The article argues that this **resembles denial in advanced illness; leaders accept the diagnosis while rejecting the treatment.** Drawing on medicine, sociology and climate psychology, it identifies four stages of modern denial: denying the

crisis, its cause, the solutions or responsibility for acting. **Extreme weather alone does not build support; people must connect events to climate change and believe action is possible.** Fossil fuel interests exploit this need by framing delay as affordability, competitiveness or pragmatism. The answer is to link disasters clearly to their cause, pair warnings with credible action, and present climate policy as protection rather than sacrifice.

In late June 2026, Europe endured one of the most extreme heatwaves in its recorded history. Poland set an all-time national temperature record of 40.5°C, while France reached 44.3°C and recorded its hottest day since nationwide measurements began. The human toll was far greater than early reports suggested. A World Health Organization assessment later identified more than 14,000 excess deaths during the two-week peak alone. World Weather Attribution concluded that heat of this severity would have been virtually impossible without human-caused climate change.

You would expect that kind of summer to accelerate climate policy. It did the opposite. In my recent analysis of climate policy reversals, I documented 45 major rollbacks across 15 jurisdictions in a single year, the full list public, from the rescinded EPA Endangerment Finding in the United States to a weakened EU carbon market and new North Sea oil approvals in the UK. Six of those reversals happened within five weeks, at the very moment heatwaves were killing people across Europe.

Almost none of the governments involved dispute the science. **They accept the diagnosis. What they increasingly reject is the treatment.** The treatment, to be clear, is not any single policy; reasonable people disagree about instruments and pace. It is the willingness to adopt measures proportionate to the diagnosis. The difference between disagreement and denial shows in behavior: disagreement rejects a policy and proposes another one of comparable scale. Denial rejects every policy and proposes nothing. To understand why that willingness is collapsing, you have to look somewhere climate commentary rarely goes: at what psychology and medicine know about how people handle knowledge they can't bear.

What Medicine Teaches Us About Unbearable Truths

Medicine has studied this for decades. A [systematic review](#) of studies on advanced and terminally ill cancer patients found that only about half

accurately understand their own prognosis. That figure alone does not prove denial. Patients misjudge their prognosis for many reasons, including cautious communication from doctors, genuine medical uncertainty, and the simple fact that hope and understanding can coexist.

But within that gap, denial plays a documented role. A [review in Cancer Management and Research](#) describes denial as a response that “can serve as a defense mechanism when confronted with information that is too distressing to be processed right away.” In the short term, this protects the psyche, and newly diagnosed patients who pass through a denial phase often show no elevated anxiety or depression. The problem is persistence: in late-stage illness, the same review finds, denial becomes “one of the main barriers to referral to palliative care.” The mechanism that once protected the patient now prevents action while action still matters.

The most instructive case for climate politics is not the patient who rejects the diagnosis. **It is the smoker who accepts it fully and keeps smoking.** Climate politics in 2026 is full of smokers: governments that accept every word of the science and approve the next oil field.

The Denial That Matters Is Not About Science

The sociologist Stanley Cohen, in his classic *States of Denial*, distinguished [three forms of denial](#): literal denial (“it isn’t happening”), interpretive denial (“it’s happening, but it’s not what you think”), and implicatory denial, which accepts the facts while denying what they demand of us.

Combine Cohen’s typology with newer research on climate delay, and the modern retreat from reality unfolds in four recognizable stages:

1. **Deny the diagnosis.** “It isn’t happening, or humans aren’t causing it.” The classic form, now a shrinking minority position in most Western publics.
2. **Deny the cause.** “The disaster is real, but climate change had nothing to do with it.” The floods were cloud seeding; the fires were arson; the heat is just summer.
3. **Deny the treatment.** “The science is right, but this particular policy is too expensive, too fast, unfair or ineffective.” Every policy, every time.
4. **Deny the responsibility.** “Action matters, but someone else must go first.” China, consumers, industry, the next government.

Each stage concedes more of the science while protecting the same outcome: inaction. And this summer supplied the sequence’s logical endpoint. One of the most discussed climate op-eds of the season, [published](#)

in [The Telegraph in July](#), disputed no science at all. It declared the war against climate change lost, argued Britain cannot stop warming alone, and **concluded net zero should be scrapped**. Stages three and four in a single column, capped with the newest escape route: surrender. Climate scientist **Michael Mann has long warned about this “doomism,”** and it belongs in the same family, because **a lost war, like a hoax, requires nothing of anyone. It converts a difficult coordination problem into an argument for surrender.** In the United States and much of Europe, literal denial is no longer the dominant form, nor the most politically useful one. The [Yale Program on Climate Change Communication](#) reported in late 2025 that the “Alarmed” segment of the American public has grown from 11% to 25% in a decade, while 11% remain “Dismissive.” Organized literal denial retains real influence, but the center of gravity has moved.

What increasingly shapes climate politics instead is implicative denial. The sociologist Kari Norgaard, who spent a year embedded in a Norwegian community for her book [Living in Denial](#), found that people who fully accepted climate science still organized their daily lives, conversations and politics as if it were not true. Not because they lacked information, but because the implications felt too heavy to hold: guilt, fear, threats to identity and livelihood.

Why Disasters Don’t Automatically Wake Us Up

You would think that living through a climate disaster makes people climate advocates. Apparently not. A [2025 study in Nature Climate Change](#), led by Viktoria Cologna at ETH Zurich, surveyed more than 70,000 people across 68 countries and matched their answers against actual exposure to extreme weather. **Merely experiencing disasters did not predict support for climate policy. What did was whether people attributed the disaster to climate change.** The authors are careful to note that causality could run both ways, but the pattern is unambiguous: the connection between event and cause has to be made consciously. It doesn’t make itself.

And when the connection is too painful to make, some minds manufacture alternatives. After flash floods killed more than 130 people in Texas in July 2025, a conspiracy theory blaming a small [cloud-seeding company](#) spread so widely that the state’s agriculture commissioner had to publicly debunk it; similar theories about “directed energy weapons” [went viral](#) within hours of the Los Angeles fires. Low trust in institutions and algorithmic amplification did much of the spreading. But for at least some of the people embracing them, the appeal may be psychological: a weather

machine is a villain you can name, blame and stop. A destabilized climate system, fed by a century of emissions, offers no such comfort. The conspiracy is not merely an explanation. It is a more bearable one. The mechanism is not confined to the fringe. Whether the escape route is a weather machine among citizens or the language of competitiveness among ministers, the psychological service can be similar: an intolerable implication is exchanged for a manageable one.

Europe Thought It Was Immune

For years, Europeans could tell themselves that climate denial was an American disease. That story no longer holds. Denial is coming back to Europe, in its evolved form.

Take Sweden, long one of the most climate-aware countries in the world. A [survey by Indikator Opinion for Swedish public television SVT](#), conducted in late July 2026 while hundreds of thousands of Europeans were fleeing wildfires in France and Spain, found that nearly 80 percent of Swedes see a strong connection between the heat records, the fires and climate change. Underneath, the number splits along identity lines: 85 percent of women see the connection against 68 percent of men, with a clear divide by party sympathy as well. Daniel Lindvall, the Uppsala University sociologist who studies climate attitudes, explained the gap in terms Norgaard would recognize instantly: “It becomes an unconscious defense of one’s identity and lifestyle, where you don’t connect extreme weather with the climate issue.”

The gap has a research pedigree: the much-cited [“cool dudes” study](#) found the same identity-protective pattern among conservative white men in the United States, for whom climate science reads less as information than as an accusation.

The same evolution is visible in European politics. [Research covered by DeSmog](#) shows that outright climate skepticism in far-right European Parliament speeches collapsed from 38% to 9% between 2004 and 2019, while acceptance of the science became the majority position within those same parties. They did not become climate advocates. They changed weapons, adopting what researchers call the [discourses of climate delay](#): competitiveness, Chinese emissions, cost of living, someone else should go first. With those arguments they have helped delay the EU’s deforestation rules and unpick parts of the Green Deal. This form of denial is harder to fact-check, because it no longer disputes any facts.

Governments Are Not Patients. But They Are Run By People

An admission, before going further: political systems can't be psychoanalyzed from a distance. Policy reversals have material causes: lobbying, elections, energy prices, industrial pressure, the security lessons of 2022. Some of the anxieties behind them are legitimate, and a handful of the rolled-back rules were arguably poorly designed. Voters worried about electricity bills are not suffering from a defense mechanism. But the material explanation and the psychological one are not rivals. They interact, and two findings show how.

First, political parties are not automatically educated by catastrophe any more than citizens are. A [2024 study in Nature Climate Change](#) analyzed more than 260,000 press releases from 68 European parties and found that extreme weather events did not increase parties' attention to environmental issues. Green parties were the sole exception, and even their attention returned to baseline within a week. The smoke enters the capital without entering the agenda.

Second, threat can actively strengthen resistance. In a [landmark study on system justification](#), Irina Feygina, John Jost and Rachel Goldsmith showed that people motivated to defend the existing social and economic order responded to environmental threat with more denial, not less, because acknowledging the crisis felt like an indictment of the system itself. Related research on [how mortality reminders affect judgment](#), an influential though contested body of work, points the same way: danger makes people cling harder to the worldview that shields them.

This is the interaction that explains the past year. Researchers now distinguish [climate obstruction](#), the organized and interest-driven blocking of action, from denial, the psychology that makes the blocking palatable. Inside boardrooms and ministries, much of what looks like denial is conscious rationalization of decisions already made. But rationalizations need customers, and that is where the psychology returns. The narratives succeed because they meet a demand for permission to accept the science without accepting its consequences. The fossil fuel lobby doesn't need to convince anyone that climate change is a hoax. All it has to supply is that permission: energy security, affordability, competitiveness, "pragmatism." Real economic anxieties make that language land harder, and the worse the climate news gets, the more welcome the comfort becomes. Again and again, the reversals I documented were justified in exactly those terms. The lobby's real product is not doubt about the science. It is comfort about the implications.

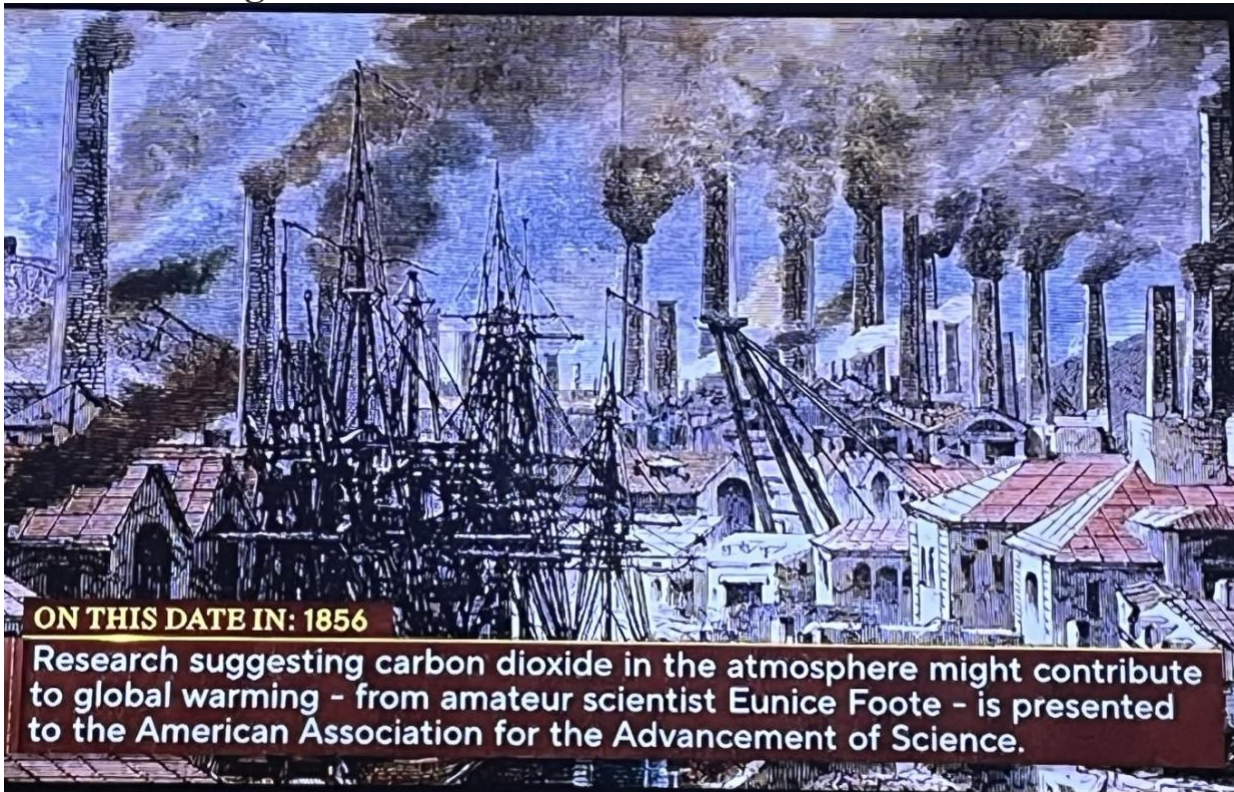
What Breaks The Spell

The reason this is not a counsel of despair also comes from medicine: denial is rarely permanent. Studies of patients who initially react with distress show marked improvement within weeks, and what helps people take in threatening information without retreating from it is not more bad news but support, clear communication and a sense of agency. The climate research points to three of the same levers:

1. **Connect the event to the cause**, immediately and explicitly. The 260,000 press release study shows attribution, not experience, travels with policy support. Every heatwave reported without its cause is a wasted teaching moment.
2. **Connect the cause to something actionable**. Catastrophe without agency produces fatalism and avoidance, in politics as in oncology. Leaders, media and executives who pair every warning with a credible next step are working with human psychology instead of against it.
3. **Frame action as protection, not sacrifice**. The system justification research found resistance fell sharply when change was presented as [preserving and improving the system](#) people value, what the authors call “system-sanctioned change.” Climate action defends energy security, health, food prices and industrial competitiveness. The side that owns the language of protection wins the psychology.

The public and the market, it should be said, are further along than the politics. In a [global study of nearly 130,000 people in 125 countries](#), 89 percent demanded stronger climate action from their governments, yet the same study found that this majority dramatically underestimates its own size, a silence that leaders read as permission to retreat. Meanwhile the Alarmed outnumber the Dismissive by more than two to one, clean energy attracts [nearly twice the investment](#) of fossil fuels, and [one in four new cars](#) sold globally is now electric. The backsliding of the past year is not evidence that action has become impossible. It is evidence that facts and market momentum do not automatically become political courage, and that a defensive reaction to a threat moving closer is being amplified by interests skilled at converting psychological discomfort into policy. Because the other thing the research on advanced illness makes brutally clear is this: denial does not change the diagnosis. It only shortens the time left to act on it.

35. In 1856 Eunice Foote warned of CO₂ caused global Warming



36 Global warming sidelined as key election topic

By Nicholas Riccardi, Jennifer McDermott and Leah Willingham

DEMOCRATS have switched their focus to a broad mandate of challenging President Trump

BOSTON — Climate change has been the backdrop to Charles Hughes' entire life, from kindergarten lessons about disappearing habitats to wildfire smoke billowing through the air he breathed while growing up in Colorado. But now that he's a college student in Massachusetts, he said global warming is rarely a top issue.

"Honestly, it doesn't come up as much," said Hughes, who chairs the state's chapter of the College Democrats.

What a difference six years makes.

During President Trump's first term and especially during the Democratic primaries to determine who would run against him in 2020, Democrats spoke constantly about climate change. They used it to rally young voters such as Hughes, fueling protests and sweeping demands to remake the economy with proposals such as the Green New Deal.

But there has been a national shift in the conversation that is sharp enough for some researchers to coin the term “**climate hushing**” to describe it. The Searchlight Institute, a Democratic think tank, urged the party to stop mentioning climate change because it is not a priority for voters. The Sunrise Movement, a left-wing group that pushed global warming as a top issue for young people, switched its mission in the fall to a broader mandate of fighting the Republican president.

The shift was encapsulated by the Democratic primary for U.S. Senate in Massachusetts on Tuesday as the incumbent, Ed Markey, 80, fended off a challenge from U.S. Rep. Seth Moulton, 47. Markey still talked about sponsoring the Green New Deal but focused more on other issues to burnish his left-wing bona fides and prove to voters that he is not too old for the job.

It was the latest example of how climate change has been eclipsed by issues such as affordability, U.S. support for Israel and, above all, how to confront Trump.

“Six years ago, Green New Deal was every phrase out of Ed Markey's mouth every chance he got,” said Mary Anne Marsh, a veteran Democratic strategist in Massachusetts. That wasn't the case this cycle. “It's about who's best to fight. Period, full stop. Everything falls under that.”

‘People are ... freaked out about other issues’

Even if the political discussion on climate change has quieted, the planet has not. Scientists say there is an increasing chance that 2026 could be the hottest year on record, or at least come close. A strengthening El Niño is forecast to be off the charts, spiking global temperatures.

Some advocates expect the issue to return to center stage if Democrats retake the U.S. House in November and climate-sparked disasters dominate the winter.

U.S. Sen. Sheldon Whitehouse of Rhode Island, a prominent Democratic voice on climate change, said in an interview that ignoring the issue is a major strategic “blunder.”

“Climate change has moved from the science department into the economics department,” he said. “It’s now battering people’s home insurance, property values, pocketbook concerns. So I think it’s a very powerful argument.”

Trump has falsely claimed climate change is “a hoax,” and his administration has undone policies one by one that would make it less damaging in the future.

The Sunrise Movement, founded in 2017 to mobilize young voters over climate issues, announced in October that it was shifting to a broader fight against “fascism.” The group’s executive director, Aru Shiney-Ajay, said that was a prescient move because of reports that federal agents infiltrated protest meetings during immigration raids in Minneapolis.

“We just live in a significantly more authoritarian country. Because of that, a lot of the Democratic primaries are about more existential questions,” Shiney-Ajay, whose network generally backs left-wing Democrats, said in an interview. “It has felt less like people care less about climate and more like people are increasingly freaked out about other issues.”

About 6 in 10 Democrats say climate change is “a very big problem” for the country, according to a Pew Research Center poll from April. That is roughly the same as in 2016. Still, climate has often taken a back seat to other issues in Democratic voters’ priorities, such as inflation, healthcare affordability and the role of money in politics.

Affordability concerns have dominated the political debate this year.

McKenzie Wilson of Blue Rose Research, a Democratic data firm, said voters have called for sweeping changes in response to economic discontent, demonstrating a level of anger not seen in years.

“In that kind of environment it’s hard to think about long-term, existential problems,” Wilson said. “If we don’t talk and focus our attention on the No. 1 thing the electorate wants to talk about, as we saw in 2024, we’re not going to be connecting with the electorate.”

Rule No. 1: ‘Don’t say climate change’

That view was summed up by the Searchlight Institute, which last year released a provocative suggestion: **“The First Rule About Solving Climate Change: Don’t Say Climate Change.”**

It contended that voters saw it as such an intimidating, complex issue that Democrats were more likely to win by focusing on other subjects — thus enabling them to regain power and tackle the crisis that they were not talking about.

Leah Stokes, a political scientist at UC Santa Barbara and author of “The Carbon Wave,” a book about Democratic President Biden’s domestic agenda, said it was “galling” when politicians made the issue less of a priority.

“The climate crisis is accelerating and we can’t really not talk about it for like a decade, because the planet will be even more on fire if we do that,” she said.

Anthony Leiserowitz, director of the Yale Program on Climate Change Communication, agreed with those concerns.

“What happens over the course of the next decade will profoundly shape the habitability of the planet for literally thousands of years to come,” he said.

Some turn climate into an affordability issue

Climate has come up as part of the national backlash to data centers, but it is only one part of the conversation about the projects’ effect. Many climate advocates are adjusting how they talk about the issue, stressing how green energy can lower prices and ease insurance costs.

“What we’re seeing right now is, whether you’re advocating for healthcare reform or climate action or some niche tech issue, everything is filtered

through some cost frame,” said Jared Leopold, a veteran Democratic strategist who has long focused on climate change.

That is how the Green New Deal came up at a recent debate between Markey and Moulton, when a voter asked how each candidate would reduce energy prices. Notably, the questioner asked about increasing nuclear or gas generation, not clean energy, to deal with cost. Markey turned the opportunity into a slam against the president.

“There was a plan in place in order to have a strong, clean affordable energy future for our commonwealth,” Markey said, “and Trump attacked it.”

Tatishe Nteta, a political scientist at the University of Massachusetts Amherst, said that is how Markey has used climate change this election — to signal both his willingness to fight Trump and his alliance with the left flank of the Democratic Party, which has racked up a series of primary wins this year. But other issues have become even more useful in doing that.

“The definition in where you’re at in terms of a progressive candidate and a progressive elected official is your viewpoint on Israel,” Nteta said. “You’re not hearing this in most races, that I’m the candidate who’s going to protect and save our planet.”

Massachusetts’ summer has been the hottest that Eileen Cefail can recall in the 30 years she has worked in the Roofers Local 33 office. “The roofers are tough as nails, and they work so hard, and their work is so grueling,” she said. “This heat has been horrendous for them.”

Cefail is backing Markey in the primary, but climate, she said, was not the main reason.

“He’s always been a union guy,” Cefail said. “He’s just for the labor.”

Riccardi, McDermott and Willingham write for the Associated Press and reported from Denver; Providence, R.I.; and Boston, respectively. AP writer Linley Sanders in Washington contributed to this report.

37 Reno Nevada Wildfire

By Haven Daly and John Seewer

RENO — A wildfire that mushroomed over the weekend in the Sierra Nevada foothills spread perilously close to neighborhoods in Reno, forcing authorities to urge more than 90,000 residents to leave their homes.

The out-of-control fire already has burned some homes, but there's concern that shifting winds could push the flames into newly developed and densely packed neighborhoods in Nevada's largest city outside of metro Las Vegas.

Schools across Washoe County were closed Monday because of the evacuations and to keep roads clear for emergency crews. Nevada's governor declared a state of emergency.

Authorities said late Sunday that the **Hawk fire** had stayed in its footprint and firefighters were extinguishing hot spots while working to keep the fire from jumping a highway and reaching homes and businesses. There was 0% containment.

The fire began Saturday and grew to more than 23 square miles on Sunday. It's the third large wildfire in the rugged terrain north of Reno in the last two weeks — all caused by human activity, according to fire officials. They haven't said whether the Hawk fire was intentionally set or accidental.

Many residents had little time to evacuate after the fire exploded in size.

"Honestly, I thought it was like in a movie," said Ruby Delatorre, who got back from a concert only to find her home in the evacuation zone. She returned Sunday to walk to her home and get a few more possessions.

"I literally want to cry and go back for all my stuff. I just got what I thought I needed," Delatorre said.

Much of Nevada's western edge is under an increased risk of wildfires this week because of high winds and low relative humidity, the National Interagency Fire Center said.

Extremely dry conditions across the western U.S. have sparked a rash of wildfires this summer. Nationwide, there have been more than 50,000 wildfires — the most over the last 10 years covering the same period, according to the national fire center.

Daly and Seewer write for the Associated Press.

38. Chinook salmon really feeling the heat

By Ian James

The Sacramento River has gotten too warm for endangered species' eggs. Chinook salmon have been laying eggs in gravelly nests in the Sacramento River for millennia. But California's biggest river is now so warm that biologists expect a significant number of the eggs won't hatch.

Environmental advocates blame the Trump administration. They say the federal government took too much water out of Shasta Lake for farms in the Central Valley, leaving the reservoir too warm for many salmon eggs to survive in a vital spawning area downstream from Shasta Dam.

"The fish are not being protected," said Jon Rosenfield, science director of the nonprofit group San Francisco Baykeeper. "We know that those eggs are getting cooked."

"California is continuing to see climate change-driven losses in snowpack that result in far less cold water available in the Shasta reservoir for releases to support salmon," said Jackie Carpenter, a spokesperson for the state water board.

Chinook salmon need cold water for their eggs to survive. When it gets warmer than 53.5 degrees, it becomes lethal.

State biologists who monitor salmon nests in the Sacramento River estimated on Sept. 4 that about 20% of the eggs may not survive. The river has gotten warmer since then.

Rosenfield said the U.S. Bureau of Reclamation took excessive water this spring and summer despite warnings.

“California is continuing to see climate change-driven losses in snowpack that result in far less cold water available in the Shasta reservoir for releases to support salmon,” said Jackie Carpenter, a spokesperson for the state water board.

38. Climate’s role seen in bigger El Niño punch

By Hayley Smith

For decades, scientists have struggled to understand the potential link between global warming and El Niño — and whether human activity is making the already powerful climate phenomenon even more extreme and disruptive.

Evidence of a connection has remained elusive, however, as El Niño is notoriously variable, making it difficult to distinguish long-term changes from its natural ebb and flow.

But now — as this year’s “super” El Niño gains strength — some researchers say they are getting closer to unraveling the mystery.

A study published recently in the journal *Science* examines temperature data from more than 900 years of coral records from the Galápagos and suggests that **El Niños have become much stronger since people started warming the planet through fossil fuel emissions.**

“Prior to the industrial era, we don’t see evidence for periods where the El Niño system is as strong as it is in the most recent decades,” said Julia Cole, a paleoclimatologist at the University of Michigan and the study’s lead author. The swings between warm and cold conditions that define El Niño “were much stronger in the last 40 to 50 years than they were prior to warming.”

The research arrives as experts and officials warn that the current El Niño, which began forming in June, is shaping up to be the strongest ever

experienced by a considerable margin. It is developing faster than the previous historic super El Niños of 1997-98 and 2015-16, and is already on track to far exceed historical temperature thresholds.

On Thursday, the World Meteorological Society issued a new El Niño forecast warning that there is a nearly 100% chance it will continue through February, prolonging its effects.

“El Niño is being supersized before our eyes,” read a statement from United Nations Secretary-General António Guterres. “The science leaves no room for doubt: the planet is in uncharted waters, and those waters are heating up. Sea surface temperatures are rising, temperatures keep climbing, and the world is in the danger zone of extreme weather.”

El Niños are periods of temporary warming in the tropical Pacific that develop every two to seven years. When they arrive, they trigger widespread changes in weather and climate around the world, from punishing heat waves to dangerous floods and severe droughts. In Southern California, El Niño is associated with warm and wet conditions.

According to authors of the recent study, modern El Niños are about 36% stronger than they were before the start of the industrial era in the mid-1800s, and show a “striking amplification” of about 16% in the last 40 years. El Niño’s strength is primarily measured by how much warmer the sea surface temperature in the tropical Pacific region is than normal.

To be sure, scientists have not yet conclusively established that humanity’s burning of fossil fuels is increasing or intensifying El Niño.

“This is another piece of evidence in an ongoing scientific debate on the role of climate change in El Niño events,” said Zeke Hausfather, a climate scientist at Berkeley Earth who was not involved in the study. “It won’t necessarily settle it, but it’s more weight on the side of the scale for a detectable climate impact.”

The ramifications of a direct connection would be serious. **Not only is El Niño a leading driver of climate and weather hazards, but it also imposes “tremendous economic costs, ecological damages, and human suffering globally,” according to the Science study. That includes**

droughts, floods, infrastructure damage, coral bleaching, wildfires, and agricultural and health effects.

Notably, the study did not find that climate change is worsening the other half of the El Niño Southern Oscillation system — La Niña. If anything, it is making ENSO’s variability “kind of lopsided,” Cole said, meaning that the change in variability leans toward stronger warm events than cold ones.

Uncovering these mechanisms has been a challenge, she said, in part because very few people live in the remote part of the ocean where El Niño forms, and “nobody was out there sticking a thermometer in the water every week” over the centuries to create a historical record. It wasn’t until scientists started receiving satellite data in the 1980s that a complete picture of El Niño began to emerge.

So Cole and her colleagues turned to the coral.

Coral can live for decades or centuries, and they form a skeleton of calcium carbonate layers as they grow, kind of like rings on a tree. By measuring aspects of their chemistry — **the ratio of strontium to calcium and the relative abundance of rare and common oxygen isotopes — the researchers could determine the ocean temperature in which the coral grew down to a specific month,** Cole said.

That allowed them to chart temperature data from the Galápagos dating back almost 1,000 years. The Galápagos sit right where eastern Pacific El Niño events have some of their strongest effects.

Though they didn’t have coral samples for every year of the last millennium, the data they generated “have this really unequivocal signal in them, and we thought it was really important to get them out there,” Cole said.

The findings may not settle the debate once and for all, but they “definitely” show an increase in El Niño’s variance in the modern era, said Art Miller, an oceanographer at Scripps Institution of Oceanography who was not involved with the study.

He said the findings are consistent with the appearance of several unusually large El Niño events in the last three decades — namely, 1997-98, 2015-16 and the one gaining strength now.

They also align with observable warming in the ocean and atmosphere, which are potentially affecting El Niño's dynamics, he said. In fact, **this year's El Niño is developing against the backdrop of unusually warm ocean temperatures, including a record-breaking marine heat wave in the Pacific Ocean that is providing a hotter baseline for the system.**

“Since the equatorial zone of the ocean in the western Pacific was loaded with heat, it was primed for triggering an El Niño,” Miller said. But the connection is something of a two-way street: Although the heat wave helped instigate El Niño in the spring and summer, El Niño is expected to feed warmth back toward the West Coast as it develops, keeping coastal waters warmer than usual in the fall and winter, he said.

Other researchers were more skeptical about the coral study's findings. University of Pennsylvania climate scientist Michael Mann noted in a post on Bluesky that other factors, such as volcanic and solar activity, could explain patterns seen in the coral record.

For his part, Hausfather cautioned that there are “pretty big uncertainties when you are working with indirect measurements like coral proxy records,” so comparing historical El Niños with modern ones is inherently hard to do.

What's more, “even if the authors are correct about the climate change link, that doesn't mean that every single El Niño event will be a strong one,” he said. “El Niño is still largely driven by natural variability, which means that some individual events will be strong and some weak.”

Cole, the lead researcher, agreed. The findings don't mean that every El Niño will be stronger than the last in a warming world, she said — nor would that be realistic given how unpredictable El Niño can be.

But even if some are weaker than others, the data indicate they are unlikely to revert to preindustrial levels anytime soon, she said. The coral records show essentially “no overlap” in El Niño's behavior between the modern era and the time before human-caused global warming, she said.

“There’s all kinds of ways that El Niño can change,” Cole said. “But this current strong event is consistent with the shift that we saw that says big strong events are going to be more common

39. Scientists forecast 450,000 global heat deaths from El Niño

By Jack Dolan

About 1,000 expected in California, without including victims of fire, floods or drought.

Scientists are forecasting more than 450,000 deaths because of intense heat generated by El Niño in the coming months, according to a new study from the Climate Impact Lab. And that’s in addition to the people likely to be killed by other climatic effects such as drought, wildfire and flooding.

Most of those heat deaths are expected in Africa and Southeast Asia, but about 3,500 are anticipated in the U.S.

About 1,000 are expected in California, said one of the study’s authors, Tamma Carleton, assistant professor of agricultural and resource economics at UC Berkeley. Roughly 450 are likely in Los Angeles and San Diego, she said.

This El Niño may be strongest on record

That news comes as local and state leaders are scrambling to prepare for the projected effects of this “super El Niño,” potentially the most intense warming of the water on the surface of the Pacific Ocean on record.

A study published recently in the journal *Science* examines temperature data from more than 900 years of coral records from the Galápagos and suggests that El Niños have become much stronger since humans started warming the planet through fossil fuel emissions.

El Niños create all manner of climate mayhem, including soaring temperatures on land, more intense storms at sea and epic rain and snowfall.

Last Monday, Gov. Gavin Newsom declared a state of emergency to free up money for coastal communities to start stockpiling sandbags and big industrial pumps, and for mountain towns to gather extra snow removal equipment.

On Tuesday, the city of Long Beach declared a local emergency so it can pay for storm preparation and cleanup without lengthy contracting red tape.

It's never a good sign when TV news trucks show up in your neighborhood before breakfast, and I counted at least four jammed into narrow side streets along the boardwalk on the Long Beach Peninsula on Wednesday morning.

They had returned to the site of spectacular destruction this month, where remnants of Hurricane Marie sent enormous waves thundering into the boardwalk with spray reaching at least three stories high and then raining down on multimillion-dollar oceanfront homes. At least 19 had to be evacuated as a result of the damage.

Another, much stronger hurricane, Polo, is churning in the Pacific off the coast of Mexico and has the potential to send even larger waves barreling toward the California coast as early as Monday.

See it as a 'postcard from the future'

All of us would be wise to view the coming months as a "postcard from the future," Carleton and her colleagues wrote in the study, because the heat the planet is likely to experience this winter is a taste of what's to come in 20 years unless something changes drastically.

But knowing something is coming and doing something about it are two very different things, Carleton acknowledged. Change is hard for everyone, from people living at subsistence level in sub-Saharan Africa to those living in relative splendor on the California coast.

“I’m a Bay Area resident; we have no air conditioning,” she said with a chuckle. “So I sit in my office sweating at the keyboard when it’s a hot day, and I actually study productivity and health effects of climate change.”

As for people on the Long Beach Peninsula, they’ve been warned for years that global warming, sea level rise and the intensification of storms almost certainly will render their homes uninhabitable in the coming decades.

Nevertheless, they remain, and their already stratospheric real estate values continue to rise.

And the news vans? They’re not going anywhere, either.

This article originally appeared in The Times’ Essential California newsletter.

40. With Storms on 2 Sides of the U.S., El Niño Shows Its Might

By [Raymond Zhong](#)

Hurricanes near Hawaii. A nor’easter on the East Coast. The ocean phenomenon’s influence on storms around the country may just be getting started.

The powerhouse El Niño in the Pacific Ocean is making itself felt on two sides of the nation for the first, but probably not last, time this year.

The [nor’easter lashing](#) the East Coast this weekend followed a path that can become more common for storms during El Niño, the climate phenomenon that originates in the tropical Pacific and goes on to influence rainfall, temperature and storms around the globe.

A continent away, [Hurricane Nolo](#), which is threatening to soak the Big Island of Hawaii with rain, is being fueled by El Niño-warmed waters in the Pacific. Since August, a parade of hurricanes has battered Hawaii with an intensity that has caught even scientists off guard.

El Niño is part of a natural cycle in the Pacific Ocean that recurs every few years and brings a cascade of weather effects across the planet. Its strength typically peaks late in the calendar year. By some metrics, this one is already the [strongest on record](#), an indication of how significantly it is likely to upend many regions' normal weather patterns in the coming months.

People around the world are already dealing with the consequences. [Indonesia is living under a haze](#) of toxic smoke from wildfires worsened by drought. [Crops have withered](#) under dry conditions in India, Central America and parts of eastern Africa. [Sea levels are rising](#) on the coast of California, giving a leg up for storms and waves to flood homes and erode beaches.

And Hawaii is confronting an extraordinary spate of hurricanes, which are drawing strength from the thick layer of warm water that El Niño produces at the surface of the central and eastern Pacific.

Besides providing more energy for Pacific hurricanes, El Niño also creates conditions in the atmosphere that help them stick around and intensify, said Kim Wood, an associate professor in the department of hydrology and atmospheric sciences at the University of Arizona.

Hawaii has been threatened by such storms before, but never in rapid succession like this year. "It is quite unusual to get that kind of back-to-back-to-back experience," Dr. Wood said. "And with how mountainous those islands are, the rain threat is just that much worse."

Before this year, only six hurricanes over the past seven decades had been recorded as passing within 50 miles of the state, according to [Michael Lowry](#), a hurricane expert for WPLG-TV in Miami. Hurricane Nolo could become the third one to do so this year.

Scientists are working to understand whether human-caused global warming might be leading to [more frequent, strong El Niños](#). They haven't reached a clear consensus, though one thing is certain: The gyrations that El Niño brings are coming on top of an ocean and atmosphere already warmed by greenhouse gas emissions. That means the effects of an El Niño — whether

downpours, wildfires or droughts — can [potentially be more severe](#) than they would have been in an earlier, cooler time for the planet.

El Niño’s influence on storms around the United States this year might just be getting started. Come winter, it is likely to help deliver more drenching rain to [California](#). During some past El Niños, the perennially water-stressed state has received one and a half times its usual amount of precipitation, often through winter storms that recharge groundwater but can also cause flooding.

For the Northeast, El Niño doesn’t directly feed storms like the one pounding the coast this weekend, though nor’easters appear to be more frequent in El Niño years. One possible reason? El Niño causes the Pacific jet stream, or the band of air moving west to east at high altitudes, to shift south. That provides a supply of energy and moisture for storms that can take shape off the Southeastern United States then swing north.

The saving grace for eastern states is that El Niño generally leads to quiet Atlantic hurricane seasons. The shift in atmospheric patterns over the Pacific also increases upper-level winds over the Atlantic, making it harder for storms to spin up into hurricanes there.

So far this year, not a single storm in the Atlantic has managed to become a hurricane.

41.Trump Administration Plans to Gut Clean Car Rules

By [Maxine Joselow](#) Reporting from Washington

The Trump administration will move to sharply scale back fuel-efficiency rules for new cars and light trucks, gutting one of the government’s most significant efforts to reduce gasoline consumption and speed the country’s shift to electric vehicles.

President Trump [said on Saturday on social media](#) that he had “just approved new Fuel Economy Standards,” adding falsely that President Joseph R. Biden Jr. had implemented an “E.V. mandate.” The transportation secretary,

The proposed rule required automakers to achieve an average fuel efficiency of 34.5 miles per gallon for cars and light trucks in model year 2031, down from the standard of 50.4 miles per gallon set by the Biden administration.

Mr. Trump claimed on social media that loosening the mileage standards would lower the price of new cars by thousands of dollars. But Congress [already eliminated fines](#) for automakers that don't meet the standards, **rendering the rollback on Monday largely symbolic.**

At the same time, drivers across the country have been spending more on gas since the U.S.-Israeli attacks on Iran began in February. The national average price of a gallon of gas was \$4.48 on Saturday, according to the AAA motor club.

The move Monday would mark the final step in a remarkable retreat from U.S. attempts to counter China's chokehold on the production of E.V.s and their batteries.

In February, the Environmental Protection Agency [ended all federal limits](#) on planet-warming pollution from cars. Last year, lawmakers also [repealed tax credits](#) of up to \$7,500 for buyers of new electric cars and blocked California from setting its own stricter limits on automobile pollution.

When Congress ended the fines for failing to meet the mileage standards, it already saved automakers hundreds of millions of dollars. The new announcement could further encourage U.S. car companies to make more big pickup trucks and sport utility vehicles, which tend to generate the most profit in the short term.

But that could threaten their competitiveness in the long run.

[E.V. sales are growing rapidly](#) in the rest of the world, spurred by concerns about spiking fuel prices amid the war in the Middle East. U.S. carmakers that delay E.V. development could be left at a significant disadvantage to foreign rivals in the coming years.

Global E.V. sales have surged over the past decade.

20406080 million cars sold 20002026Gas and DieselElectricHybrid
Source: IEA. Note: Electric category includes plug-in hybrids. Sales for 2026 are estimated.

Congress created the mileage standards in 1975 in response to an oil embargo by Middle Eastern countries. Since then, automakers [have steadily improved](#) the distance that conventional cars can travel on a tank of gas while expanding their electric and hybrid offerings.

Transportation is the country's largest source of the greenhouse gases, like carbon dioxide, that are warming the planet. The Biden administration strengthened the mileage standards as part of its sweeping strategy for addressing climate change.

But Mr. Trump, who has called climate change a “hoax,” made attacks on E.V.s a mainstay of his campaign to retake the White House. He claimed falsely and repeatedly that Mr. Biden's policies would ban conventional cars and force motorists to go electric.

The Sierra Club, an environmental group, said in a statement on Saturday that it planned to challenge the Trump administration's move in court. It also argued that the decision would raise fuel costs when affordability is a top concern for many voters.

“Americans need relief from high costs, but instead Trump is giving automakers a free pass on pollution and handing families the bill — at the pump and with their health,” said Katherine Garcia, the director of the group's Clean Transportation for All campaign. “The Sierra Club will fight this senseless rollback every step of the way.”

Representatives for the Alliance for Automotive Innovation, a lobbying group for most major carmakers, did not immediately comment on the plan. The group previously argued that the Biden administration's rules were difficult for many members to meet.

Jack Ewing contributed reporting.

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