

PART ONE – COP 30

- A very useful and thorough infographic on the progress made since the Paris agreement [HERE](#)

10 Years After a Breakthrough Climate Pact, Here’s Where We Are, *The New York Times*

Text 1 -Oil Producers, but Maybe Not the Planet, Get a Win as Climate Talks End

The final agreement, with no direct mention of the fossil fuels dangerously heating Earth, was a victory for countries like Saudi Arabia and Russia, diplomats said.

By [Max Bearak](#) and [Lisa Friedman](#), Reporting from Belém, Brazil, *The New York Times*, Nov. 22, 2025

Global climate negotiations ended on Saturday in Brazil with a watered-down resolution that made no direct mention of fossil fuels, the main driver of global warming. The final statement, roundly criticized by diplomats as insufficient, was a victory for oil producers like Saudi Arabia and Russia. It included plenty of warnings about the cost of inaction but few provisions for how the world might address dangerously rising global temperatures head-on.

Without a rapid transition away from oil, gas and coal, scientists warn, the planet faces increasing devastation from deadly heat waves, droughts, floods and wildfires.

A marathon series of frenetic Friday night meetings ultimately salvaged the talks in Belém, on the edge of the Amazon rainforest, from total collapse.

Oil-producing countries like Saudi Arabia were adamant that their key export not be singled out. They were joined by many African and Asian countries that argued, as they have in earlier talks, that Western countries bear unique responsibility in paying for climate change because they are historically responsible for the most greenhouse gas emissions.

Around 80 countries, or a little under half of those present, demanded a concrete plan to move away from fossil fuels.

Outside of Europe, they did not include any of the world’s major economies.

After the gavel fell, André Corrêa do Lago, the Brazilian diplomat leading the talks, announced that his country would lead an independent effort to rally nations to develop specific plans for transitioning away from fossil fuels and for protecting tropical forests. The political effort would have no force of international law, but there was a round of polite applause from delegates.

Then the objections began. Panama, then Colombia, then the European Union. One after another, diplomats said

they were bitterly disappointed in the process and the outcome.

“Mr. President, this is the COP of truth,” said Daniela Durán González, a Colombian diplomat. “The truth cannot support an outcome that ignores the science.”

She and others said that the summit leaders had ignored their concerns before approving the deal.



A delegate from the Russian Federation raised the country’s nameplate to interrupt the session and protest the conduct of Latin American countries during negotiations. Credit...Alessandro Falco for The New York Times

Activists said the weak deal heightened fears among many countries, particularly vulnerable island states, that the world is politically unwilling or unable to address climate change and its cascade of accompanying catastrophes.

“Petrostates and their political allies are doing everything they can to try to stop the world from making progress on solving the climate crisis,” former Vice President Al Gore said in a statement. “They fiercely opposed what would have been the most important step forward at COP30: the development of a road map away from fossil fuels.”

The talks, known as COP30, were inauspicious from the get-go.

The U.S. government under President Trump effectively boycotted the annual gathering, thumbing

its nose at multilateral climate action while simultaneously revving up the American fossil fuel industry and repealing federal support for renewable energy and electric vehicles. It was the first time in 30 years of climate talks that the United States had not attended.

And yet, in many ways, the disappointment of the summit was a result of America's absence. While the United States under Democratic administrations has not always been a champion of ambitious climate action, it had consistently succeeded in one thing: Demanding that major economies with high greenhouse gas emissions, like China and Saudi Arabia, take on more responsibility. Without the United States, diplomats in Belém acknowledged, that enormous source of pressure was gone.

"The U.S. has harmed itself by taking itself out of the process," said David Waskow, who leads the climate program at the World Resources Institute, a research group. "It's not here to push a number of other economies. For example, China."

Taylor Rogers, a White House spokeswoman, declined to comment on the outcome of the talks, but said in a statement that Mr. Trump had "set a strong example for the rest of the world" by pursuing new fossil fuel development. "President Trump has been clear," she said. "He will not jeopardize our country's economic and national security to pursue vague climate goals that are killing other countries."

China, currently the world's largest greenhouse gas emitter by far, played a limited role in Belém, choosing not to step into the leadership vacuum created by the absence of the United States.

Despite dominating the world's clean energy industry, China avoided strong positions on most, if not all, of the main sticking points at the talks: reducing emissions, providing money to help poorer countries cope with climate change and contributions to a new Brazilian fund aimed at stemming deforestation. At China's urging, the deal calls for nations to not use climate as an excuse to restrict international trade.

Image

The mild resolution was also a rebuff of Brazil's president, Luiz Inácio Lula da Silva, who had billed the event as a historic moment to make progress on climate action while showcasing the Amazon, often called the "lungs of the world" for the huge amount of planet-warming carbon dioxide it pulls out of the atmosphere.

In a speech that opened the talks, he called for negotiators to deliver a "road map" for a global transition away from fossil fuels. In the end, there was no such plan.

At talks two years ago in Dubai, the nations of the world already agreed on a "transition away" from fossil fuels by the middle of this century. Heeding President Lula's

suggestion, a group of countries — including Britain, Colombia, Denmark, France, Germany and Kenya — had pushed in Belém for a detailed plan.

A simple acknowledgment of the Dubai deal is all they got. The final deal says countries should implement their climate plans "taking into account the decisions" made in Dubai. Europeans said the language, while coded, was still a win.

"We know that it is very difficult for many countries, like oil-producing countries, that have been very vocal against it," said Maria da Graça Carvalho, Portugal's environment minister. "It was the best we could get to have this reference."

Image



Members of the Ethiopian delegation celebrating their selection to host COP32. Credit...Pablo Porciuncula/Agence France-Presse — Getty Images

Negotiators from the European Union had argued particularly for inclusion of language around fossil fuels, but a wide range of developing countries maintained that it was more important for Western countries to pledge larger amounts of money to help poorer ones cope with the already-mounting costs of global warming.

That responsibility, they said, should fall largely on European countries and the United States because of their giant contributions to greenhouse gas emissions since the Industrial Revolution began. The United States alone accounts for roughly a quarter of all greenhouse gas emissions to date.

Ali Mohamed, Kenya's climate envoy, said that financial obligations from rich countries to poor ones "cannot remain afterthoughts for a continent responsible for less than 4 percent of global emissions."

President Lula's signature anti-deforestation initiative, the Tropical Forests Forever Facility, also fell far short of his ambitious goal of raising \$25 billion in public financing that would essentially pay countries to protect forests. By the end of the talks, the program had received around \$5 billion in pledges from a small handful of countries, including Norway, Indonesia and France, with Germany saying it would soon contribute an unspecified amount.

The deal did bolster promises of funding to protect communities from the impacts of climate-fueled disasters. Small island nations in particular wanted more assurances that nations would triple adaptation finance, and the final

agreement does that, calling for “efforts to at least triple adaptation finance by 2035.”

165 Exhausted delegates had long trips home ahead of them. Belém, while vibrant, was an incredibly expensive and hard-to-reach venue for negotiators from other continents. The city also lacked enough accommodations for the roughly 50,000 attendees, and many slept on two European

170 cruise ships brought to Belém as temporary hotels, while others made makeshift arrangements with locals to sleep in their apartments.

The purpose-built event space was only completed in the days before negotiators arrived. Near-daily torrential rains

175 buffeted its flimsy walls, and as water poured into negotiating rooms, deafening claps of thunder raised goose bumps. On Thursday, as negotiations headed into their most intense final stretch, a fire broke out. The venue was evacuated, 13 people were treated for smoke inhalation

180 and negotiators resorted to diplomacy in Uber rides between one another’s hotels.

Image

In the end, the talks were stymied by the widening gulf between the world’s biggest emitters and the poorest, most vulnerable countries, which are pleading for a more ambitious collective response to climate change.

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“I couldn’t say we’re happy, but we are giving thanks that in this geopolitical climate that we have not regressed,” said Ruleta Camacho Thomas, who represented Antigua and Barbuda at the talks. “We had hoped that the evidence

190 of what is actually happening on our islands would have been enough to leverage more support.”

195 Ten years ago at landmark climate talks near Paris, nearly 200 nations agreed to keep the average increase in global temperature to “well below” 2 degrees Celsius, or 3.6 degrees Fahrenheit, and preferably closer to 1.5 degrees Celsius, compared with preindustrial levels.

While significant progress has been made, the “well below” 2-degree goal is almost certain to not be met, given a decade of sluggish action. Based on policies that countries have put in place and current technology trends, Earth is expected to warm by roughly 2.8 degrees Celsius this century, compared with preindustrial levels, according to the latest U. N. calculations.

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Emissions have increased significantly since the Paris Agreement in 2015. Carbon dioxide from the burning of fossil fuels is on track to hit a record high this year. The world has already warmed about 1.3 degrees Celsius since late 19th-century averages.

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210 Scientists have repeatedly warned that each tenth of a degree of warming makes the climate both less predictable — with enormous ramifications for agriculture, urban planning and global supply chains — as well as more prone to extremes like droughts, floods and wildfires, which are deepening humanitarian crises and driving waves of migration.

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Max Bearak is a Times reporter who writes about global energy and climate policies and new approaches to reducing greenhouse gas emissions.

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Lisa Friedman is a Times reporter who writes about how governments are addressing climate change and the effects of those policies on communities.

Two Opinion Pieces on COP 30

Text 2 - Another Cop wrecked by fossil fuel interests and our leaders’ cowardice – but there is another way

Genevieve Guenther, *The Guardian*, Mon 24 Nov 2025

Genevieve Guenther is the founding director of End Climate Silence and the author of The Language of Climate Politics

The 30th conference of the parties (COP30), the annual climate summit of all nations party to the UNFCCC, just ended. Stakeholders are out in the media trying spin the outcome as a win. Simon Stiell, climate change executive

5 secretary for the UN is, for instance, praising Cop30 for showing that “climate cooperation is alive and kicking, keeping humanity in the fight for a liveable planet”. But let us be clear. The conference was a failure. Its outcome, the decision text known as the Global Mutirão or

10 Global Collective Effort, is, in essence, a form of climate denial.

In 2023, the Intergovernmental Panel on Climate Change (IPCC) determined that the world had already developed, or planned to develop, too much fossil fuel to

15 be able to halt global heating at 2C. It acknowledged that the capital assets built up around fossil fuels must be stranded – that is to say, abandoned and not used – if warming was to be limited to 2C. But the Cop30 decision text ignores all this. Indeed, it never even mentions fossil

20 fuels.

This failure is all the more bitter because Cop30 had initially sent out so many hopeful signals that it would finally tackle the “transitioning away from fossil fuels” pledge from Cop28. Speaking ahead of the

25 conference, the Brazilian president, Luiz Inácio Lula da Silva, said that the world needs “roadmaps that will enable humankind, in a fair and planned manner, to overcome its dependence on fossil fuels”.

Lula's call was backed by about 90 other nations. After a
30 press conference where 20 ministers and climate envoys
demanded that the proposed language on the roadmap in
the first draft text be "strengthened" and adopted, the
EU circulated its own proposal for incorporating the
roadmap in the final text.

35 By Friday, the number of countries supporting the
roadmap to fossil-fuel phaseout rose to 89. Yet any
reference to it disappeared from the second draft that
dropped on the same day. Thanks to Cop30, the fossil fuel
era will simply continue.

40 It seems clear that the petrostates, led by Russia and Saudi
Arabia, fought against fossil fuel phaseout and won. If they
feel the phaseout is an existential threat to their economies
and their sovereignty, perhaps they should consider how
the climate crisis is rendering the Middle East
45 uninhabitable. The very week of Cop30, Iran's president,
Masoud Pezeshkian, announced that Tehran, Iran's capital
city of 16 million, would need to be abandoned and re-
established elsewhere, because, after years of climate-
fuelled drought, its water has finally run out.

50 Surely these states are being supported in their fossil-fuel
authoritarianism by Donald Trump, who is the president of
the world's largest producer of fossil fuels and who calls
the climate crisis a "con job". Even though the US was
officially absent from the negotiations, Trump's alliance
55 with Saudi Arabia, and seeming affinity for Russia,
underwrites their ability to advance their own energy
interests.

Yet would this power be as great if the world's "climate
leaders" had more courage? It is remarkable that at the
60 very moment the EU was supposedly fighting to include a

roadmap to fossil fuel phaseout in the Cop decision, Ursula
von der Leyen, president of the European Commission,
was telling a press conference at the G20 that "we are not
fighting fossil fuels, we are fighting the *emissions* from
65 fossil fuels." Not only does this statement directly
undermine her own negotiators' positions, it is in itself
nonsensical – akin to saying "we are not giving up eating
ice-cream, we are giving up absorbing the calories from
that ice-cream."

70 More to the point, von der Leyen's language echoed nearly
verbatim the words of Osama Faqeeha, deputy
environment minister for Saudi Arabia, who told a
journalist asking about the Cop30 roadmap that "the issue
is the emissions, it's not the fuel". (...)

75 For one thing, the amount of CO2 that can be stored safely
underground is limited. That the president of the
commission repeats such nonsense reveals why attempts
like Cop30 repeatedly fail: so-called climate leaders in fact
evince deep ambivalence about phasing out fossil fuels,
80 ultimately unifying global climate politics around the lie
that we can keep using fossil fuels and still deal with the
climate crisis. (...)

One bright spot of Cop30 is that Colombia and the
Netherlands, backed by 22 nations, will independently
85 advance a roadmap to fossil fuel phaseout, beginning with
a conference in April 2026. This conference could be a
gamechanger. UN rules require all Cop decision texts to be
approved unanimously, giving the petrostates veto power
over global climate politics. The creation of a fossil-fuel
90 roadmap outside the Cop process may establish a trading
bloc that could begin to sanction nations – and banks – that
refuse to wind down fossil fuels.

Text 3 - We delivered a clear message at Cop30: the delayers and defeatists are losing the climate fight

Ed Miliband, *The Guardian*, Sun 23 Nov 2025



Ed Miliband is the secretary of state for energy security and net zero

Sweaty, maddening, sleepless. That's what it was like to be
part of Cop30 in Brazil. And yet more than 190 countries
came together in the rainforest of the Amazon and
reaffirmed their faith in multilateralism, the Paris
5 agreement and the need to redouble our efforts to keep
global warming to 1.5C.

We went to Cop because working with other countries to
tackle the climate crisis is the only way to protect our home
and way of life. We know the UK produces just 1% of
10 emissions, which is why, as the prime minister said in

Belém, our government is "all-in" on working with others
to reduce the remaining 99%.

We also know there are huge opportunities from driving
the transition forward, which is why in Britain we are
15 making historic investments in renewables and nuclear,
upgrading millions of homes, and acting to protect nature.
It is true that Britain wanted more from this Cop, including
details of how we would speed up the global energy
transition through an agreement that explicitly pledged a
20 roadmap for the transition away from fossil fuels. This
didn't happen because some countries would not agree.

Yet on this issue, we have seen the emergence of an impressive coalition of 83 countries from the global north and global south, backed by more than 140 global businesses and civil society groups. And Brazil will launch a roadmap to help countries transition away from fossil fuels and scale up clean energy.

This offers such an important lesson: that detailed negotiations matter, but the movements we build around them profoundly influence what can be delivered. The roadmap to achieve our goal to halt and reverse deforestation by 2030 offers the same opportunity to drive forward our global efforts to tackle the nature and climate crises together.

There is also a larger picture here. This year's summit was a test of whether, at a time of political challenge, countries would keep working together on the greatest collective threat we face or, with the US stepping out of the Paris agreement, there might be a domino effect of others departing. For all the challenges, countries chose the path of cooperation.

Cop30 therefore forms part of the long history of these negotiations that have seen the world change its trajectory from 4C of warming around a decade ago to 2.3- 2.5C. Despite that progress, our goal is 1.5C for a reason – because the science is clear that every fraction of a degree matters in limiting the impacts people will face here and around the world. That is why it is important that the world has pledged to enhance efforts to meet it through the Belém Mission to 1.5 and Global Implementation Accelerator.

Ambition on emissions reduction goes hand-in-hand with finance to make that possible, including for developing countries. Last year, countries agreed that, by 2035, we would need to mobilise at least \$300bn (£230bn) of

climate finance annually for developing countries. This year, as a core part of our fight against climate change, we agreed that this finance needs to be targeted at aiming to treble the support to building resilience to climate impacts.

Our Brazilian hosts were determined to make this the implementation Cop – and much progress was made outside the negotiating halls. This was, of course, the first Cop in the Amazon, and the UK was proud to work with Brazil in the two years running up to the summit to help it develop the Tropical Forest Forever Facility, which offers an incredibly inspiring solution to global deforestation.

We also worked alongside Brazil and many others on the Global Climate Action Agenda, which is about building the coalitions spanning governments, businesses, cities and civil society needed to accelerate action on the ground – on issues from reducing methane emissions and phasing out coal, to unlocking investment in clean energy.

Thousands of British businesses were involved in these initiatives. Our researchers, universities, mayors and others were also deeply engaged on climate issues at this Cop. And the UK was key to delivering the final outcomes of this summit, because of our record of climate leadership at home and abroad, as well as the extraordinary skill and determination of our civil service.

The message coming out of Belém was clear: despite the noise, clean energy and climate action remain the foundation on which the global economy is being remade and rebuilt. We are up against the march of time and massive global forces that would slow down or stop action.

In the face of this opposition, multilateralism is our best hope. For all its flaws, Cop has reaffirmed the belief of the vast majority of the world in this ideal. Those who would deny or prevent action are not winning the argument, they are losing.

Text 4 - COP30 : « Alors que l'action climatique risque d'être éclipsée par une vision politique de court terme, les villes ont gardé les yeux rivés sur l'horizon »

Tribune

Laurence Tubiana PDG de la Fondation européenne pour le climat

Teresa Ribera Vice-présidente exécutive de la Commission européenne

Dans une tribune au « Monde », la vice-présidente exécutive de la Commission européenne chargée d'une transition propre, juste et compétitive, Teresa Ribera, et a) **la PDG de la Fondation européenne** pour le climat, Laurence Tubiana, considèrent les villes européennes comme un laboratoire et un modèle pour le progrès climatique mondial.

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1/ Partout en Europe et dans le monde, c'est dans les villes que la lutte contre la crise climatique est la plus

tangible et qu'elle est en train d'être gagnée. Des îlots de fraîcheur de Paris aux quartiers résilients au changement climatique à Barcelone, 2/ **les villes transforment leurs ambitions en actions concrètes.** Alors que le monde s'apprête à se réunir de nouveau à Belem (Brésil) pour la COP30, à partir du 10 novembre, il est temps de reconnaître que les villes et les régions ne sont pas seulement des partenaires de mise en œuvre : elles sont un pilier de la lutte mondiale contre le changement climatique.

3/ Il y a dix ans, c'est à Paris que fut négocié un accord international historique sur le climat. Dès le départ, il reflétait une nouvelle conception de la manière dont l'action climatique doit fonctionner : une réponse collective et à plusieurs niveaux. Au cours de la dernière décennie, alors que les nations s'efforçaient d'atteindre des objectifs climatiques ambitieux, il est devenu de plus en plus évident qu'elles ne pouvaient y parvenir sans l'aide des villes et des régions. Ce constat a guidé l'approche européenne de l'action climatique.

4/ L'histoire climatique de l'Europe a toujours été celle d'un partenariat. Le pacte vert pour l'Europe et les politiques qui ont suivi ont été élaborés sur la base d'une coopération entre les institutions de l'Union européenne (UE), les gouvernements nationaux, les régions et les villes, chacun contribuant à sa manière à l'objectif collectif d'une transition juste et durable. En Allemagne, par exemple, les gouvernements régionaux développent **b) des réseaux d'hydrogène** en collaboration avec les ministères fédéraux. En Italie, les régions adaptent **c) leurs plans d'économie circulaire** aux industries locales. En Pologne, les villes modernisent le chauffage urbain avec le soutien de l'Etat et de l'UE. Ensemble, ces exemples montrent que, lorsque la responsabilité et l'innovation sont partagées, les politiques deviennent plus résilientes et plus adaptables.

d) Un filet de sécurité

Le partenariat entre ces différents niveaux contribue également à créer de la confiance. **5/ Les citoyens sont plus directement concernés par la transition lorsqu'ils en voient les effets près de chez eux,** sous la forme d'un air plus pur, de logements plus efficaces ou de meilleurs transports. La proximité avec la société civile permet d'obtenir un retour d'information en temps réel, ce qui garantit que la mise en œuvre reste crédible et équitable.

Les villes et les autorités régionales ont également une vision directe des réalités quotidiennes des impacts croissants du changement climatique. Après les vagues de chaleur meurtrières de cet été, nous avons vu les villes s'adapter rapidement à la hausse des températures. Madrid a élaboré une feuille de route pour faire face à la chaleur ; Paris a mis en place un réseau d'« îlots de fraîcheur » ; Séville nomme et classe désormais les vagues de chaleur, reconnaissant qu'elles nécessitent la même urgence que les tempêtes majeures. **5 bis/A une époque où l'action climatique risque d'être éclipsée par une vision politique court terme,** les villes, elles, ont gardé les yeux rivés sur l'horizon.

Partout, l'action climatique est confrontée à des pressions similaires, économiques, sociales et politiques, qui sapent les progrès et divisent l'attention des dirigeants nationaux. La vigilance et la réactivité des villes et des régions ont formé un filet de sécurité pour les efforts climatiques de l'Europe. Dans toute l'Europe, comme dans de

nombreuses régions du monde, le rythme de la transition verte est mis à l'épreuve par l'incertitude géopolitique et la polarisation politique. Le risque de recul est réel. Les dirigeants locaux ne peuvent toutefois pas se permettre d'être distraits lorsque les routes se déforment, que les récoltes se fanent et que des milliers de personnes meurent à cause de la chaleur. Dans de telles circonstances, les villes, les régions et les collectivités locales européennes vont être amenées à jouer un rôle essentiel pour soutenir les progrès et maintenir la confiance du public.

Les analyses du C40 Cités et de la **Convention mondiale des maires (GCoM)** montrent que les villes devancent systématiquement les gouvernements nationaux en matière d'action climatique. Sur les **97 villes mondiales du C40**, près de 70 % d'entre elles, dont des villes européennes telles que Rome, Athènes, Paris et Madrid, se sont fixé des objectifs plus ambitieux que leurs gouvernements nationaux, et plus de 50 % d'entre elles visent à atteindre leurs objectifs plus rapidement. Par ailleurs, 75 % des villes du GCoM, dont de nombreuses municipalités de petite et moyenne taille, réduisent leurs émissions par habitant plus rapidement que leurs gouvernements nationaux.

L'offre est sur la table

Lors de la COP30, les dirigeants mondiaux se réuniront à nouveau pour réfléchir aux progrès accomplis au cours de la décennie écoulée depuis Paris et élaborer la meilleure stratégie pour aller de l'avant. Une chose est sûre, ce qui importera le plus, c'est la mise en œuvre, c'est-à-dire veiller à ce que les promesses se traduisent par des changements visibles.

Si les gouvernements souhaitent sérieusement mettre en œuvre ce qu'ils ont convenu lors des précédentes COP, **6/ils doivent rechercher activement des perspectives de partenariat avec les acteurs locaux et régionaux.** Lors du Forum des dirigeants locaux de la COP30, coorganisé par la présidence de la COP30 et Bloomberg Philanthropies, les dirigeants européens infranationaux s'associeront à leurs homologues du monde entier pour montrer concrètement comment les villes, les régions et les nations peuvent travailler ensemble pour atteindre les objectifs climatiques. **7/L'offre est sur la table, les gouvernements nationaux devraient la saisir.**

Pour consolider le rôle des gouvernements municipaux et régionaux en tant que filets de sécurité, **8/ il faut mobiliser des financements climatiques à la hauteur.** La Coalition pour des partenariats multinationaux ambitieux (Champ) ouvre déjà de nouvelles perspectives de financement et brise les cloisonnements entre les initiatives locales, nationales et internationales. Lors de la COP30, les pays auront l'occasion de tirer parti de la dynamique créée par la Champ en y adhérant et en s'engageant à mettre en place les partenariats et les financements nécessaires pour

transformer les ambitions climatiques locales en actions mondiales.

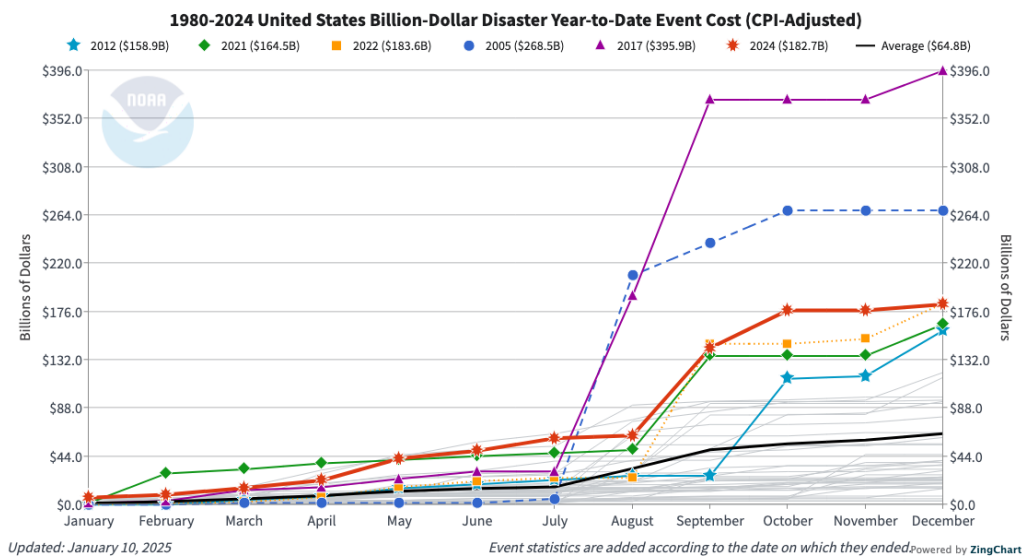
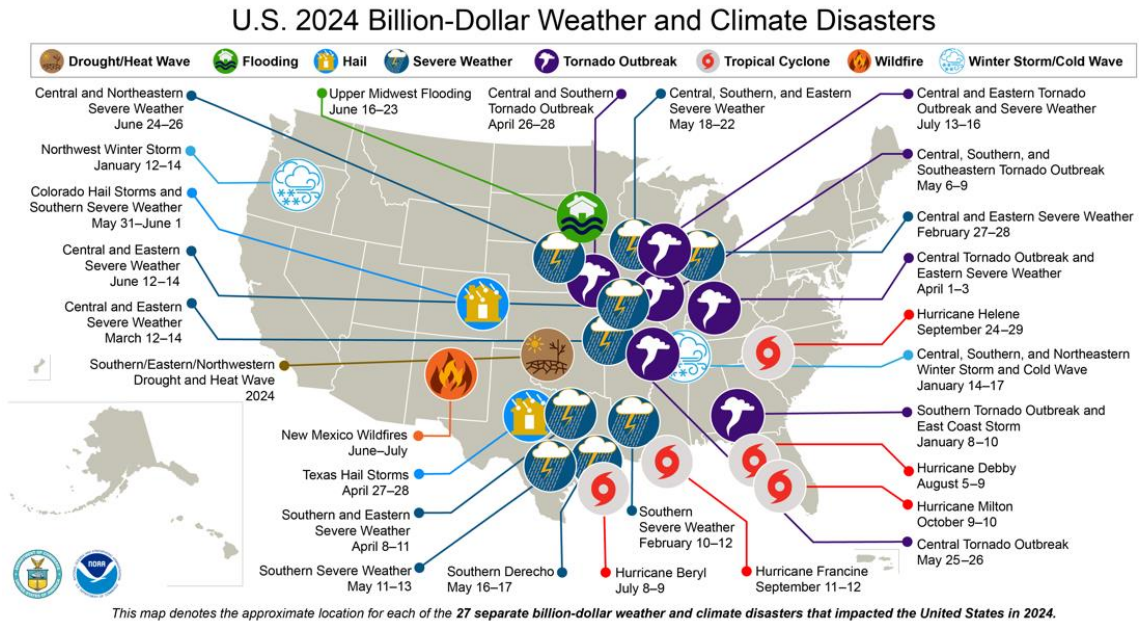
A Paris, le monde entier est convenu que la crise climatique méritait notre attention. Dix ans plus tard, les villes et les régions ont tenu cette promesse. Elles nous rappellent que les progrès ne se font pas dans les salles de négociation, mais dans les quartiers, les écoles et les rues.

8/Lors de la COP30, les dirigeants nationaux devraient suivre leur exemple et mettre en œuvre les ressources nécessaires pour réaliser leurs ambitions.

Teresa Ribera est la vice-présidente exécutive de la Commission européenne, chargée d'une transition propre, juste et compétitive ; **Laurence Tubiana** est la PDG de la Fondation européenne pour le climat.

PART TWO – More and more frequent extreme weather events

Documents 5 a & b



www.euronews.com, August 29, 2025 (abridged)

Twenty years ago this week, Hurricane Katrina ripped into Louisiana and left New Orleans flooded. Nearly 2,000 people died. Entire neighbourhoods were lost. It was the costliest storm in US history, and it reshaped how the country responds to disasters.

But the systems built in Katrina's wake are now under threat.

Scientists and emergency managers are warning that cuts to forecasting and federal response systems risk leaving the US exposed in the midst of hurricane season, and as climate change fuels ever stronger storms.

Katrina made landfall on 29 August 2005 as a Category 3 hurricane. The wind was brutal, but it was the flooding that devastated New Orleans.

Built by the Army Corps of Engineers to help ships navigate the Mississippi River, the flood walls and concrete levees surrounding the city failed, leaving 80 per cent of it submerged for weeks.

Thousands clung to rooftops waiting to be rescued. Others were crammed into the city's Superdome stadium without food or **medicine**.

In all, 1,833 people died across five states, and the economic cost was staggering. Adjusted for inflation, damages topped \$200 billion (€170 billion), according to the National Oceanic and Atmospheric Administration (NOAA).

The city's population has never recovered. From nearly half a million before the storm, it has dropped to 384,000 today. Many who fled Katrina never returned.

The scale of the failure forced many changes. FEMA was restructured. And NOAA launched a major research effort to sharpen its hurricane **forecasts**. New levees were built to protect cities from floodwaters.

Since 2005, forecast accuracy has improved 50 per cent, according to NOAA data cited by the non-profit Ocean Conservancy. Tracking and intensity predictions have become more precise, saving billions by allowing tighter evacuation zones and faster response.

In the last three years alone, predictions about the tracks hurricanes will follow have improved 8 per cent and intensity forecasts 10 per cent, according to Ocean Conservancy.

Those gains have come from long-term investment. NOAA's Hurricane Forecast Improvement Project, launched in 2007, built the research backbone for better models and data. Its Hurricane Analysis and Forecasting System, operational since 2023, now provides seven-day forecasts on storm tracks, intensity, surge, rainfall and even tornado risk. Upgrades planned for 2025 now aim to capture how multiple storms interact across vast distances, providing unprecedented detail to forecasters.

But all of this depends on NOAA's full system being operational – its satellites, ocean sensors, planes, supercomputers and data from international partners. US lawmakers are now weighing cuts that would slash that system and reduce the staff who oversee it.

"NOAA saves lives. Period," Jeff Watters of Ocean Conservancy said in a press release this week. "Cut any link in that chain and you weaken the whole and put people at risk." [...]

NOAA is not the only American agency in turmoil.

According to a letter signed by more than 180 current and former employees at FEMA – the US Federal Emergency Management Agency created by President Jimmy Carter in 1978 – around one-third of the agency's permanent staff have left since January. It follows criticism and threats of closure from the Trump administration. Senior officials were pushed out while inexperienced political appointees took over, the authors note.

In the letter – titled the 'Katrina Declaration' – they accused the Trump administration of ignoring the lessons that lawmakers wrote into the Post-Katrina Emergency Management Reform Act.

"Hurricane Katrina was not just a natural disaster, but a man-made one," they wrote. "Two decades later, FEMA is enacting processes and leadership structures that echo the conditions [that law] was designed to prevent."

The letter comes in the middle of a hurricane season that NOAA expects to be **above-normal**, and just a month after deadly **floods in Texas** killed at least 135 people, including 37 children. Experts say FEMA's weakened capacity worsened the death toll. [...] (631 words)

PART THREE – Aiming for net zero (or not) in the U.K.

Text 7 - UK unveils ‘carbon budget delivery plan’ to get back on track for net zero targets

The Guardian, October 29, 2025 (abridged)

The UK government will go “all in” on clean energy and climate policy, the energy secretary has said, as he unveiled plans to put the UK back on track to reach its net zero commitments.

In the face of intensifying attacks on climate policy from the poll-leading Reform UK party and the Conservatives, the government insists that pushing for renewable energy and lower carbon emissions will reduce household bills and boost the economy.

Ed Miliband, the secretary of state for energy security and net zero, told the Guardian: “This Labour government is all in on action to tackle the climate crisis because it is the way to secure better lives for people in Britain today and protect future generations tomorrow.

“This plan sets out the ambitious actions we have taken in our first 15 months – unleashing investment, creating jobs, rebuilding our energy security. Meanwhile, our political opponents have embarked down an anti-jobs, anti-science path that would spell disaster for our economy, our security and our planet. [...]

The prime minister, Keir Starmer, has backed the blueprint, called the “carbon budget delivery plan”, published on Wednesday afternoon, by which the government has reaffirmed its commitment to decarbonise the UK’s electricity supply by 2030 and reduce greenhouse gas emissions drastically by 2037.

Renters will be allowed to demand that their landlords give them access to electric vehicle charging, in a redrawing of current rules, and industry will gain discounts to help reduce its energy costs.

Heat pumps will be targeted as the low-carbon heating option to which the vast majority of the country will have to move, but the government has refused to rule out hydrogen for home heating, despite expert evidence that it would be expensive and unviable.

No firm price tag will be attached to the plan, but the government calculates it will not add to already high

energy bills. The manifesto commitment to reduce energy bills by £300 still stands.

Although the government would not confirm this, some observers believe that Rachel Reeves, the chancellor, may move to remove or reduce VAT on energy bills in the November budget. [...]

The plan covers all the main sources of carbon emissions, including energy, transport, agriculture, homes and industry. But campaigners said there were some omissions – for instance, there was no commitment to reducing the number of flights people take. The government is greenlighting the expansion of airports including Gatwick and Heathrow.

Instead, the plan promises that 22% of fuel used in planes will be sustainable aviation fuel, which is in high demand globally and requires huge amounts of land to produce. [...]

The plan makes little mention of public transport, focusing on the uptake of electric vehicles rather than planning new railways. Climate experts say road use will have to be reduced to meet net zero, and motorist numbers are rising year-on-year.

Emissions from farming are also stubbornly high and hard to bring down, but farming measures in the plan focus on “land use change”. To be consistent with recommendations from the Climate Change Committee, this would have to mean less land used for animal agriculture, but that is not explicitly addressed. [...]

But others within government argue that backing down on climate policy will only alienate core voters, while depriving the UK of the opportunities of low-carbon economic growth. The CBI found that the green economy was growing three times faster than the rest of the economy, and many key businesses have expressed their backing for net zero. [...] (579 words)

Text 8 - Tories pledge to extract all remaining North Sea oil and gas reserves

The Financial Times, August 31, 2025

Kemi Badenoch has pledged to extract every last molecule of oil and gas from the UK North Sea, as the Conservative party seeks to distance itself from its previous support for the country’s “net zero” emissions target.

The Conservative leader said the North Sea Transition Authority regulator would be rebranded as the North Sea Authority under a Tory government, with environmental regulations slashed in favour of a single mandate to “maximise the extraction of our oil and gas”.

Badenoch said the UK's move away from oil and gas extraction was a "unilateral act of economic disarmament", adding it was "absurd" the country was "leaving vital resources untapped whilst neighbours like Norway extract them from the same seabed".

"A future Conservative government will scrap all mandates for the North Sea beyond maximising extraction," Badenoch said. "It is time that common sense, economic growth and our national interest came first . . . We are going to get all our oil and gas out of the North Sea."

Badenoch's statement, which comes ahead of a speech at a major oil and gas conference in Aberdeen on Tuesday, marks a significant departure from the previous Conservative government that hosted UN Climate Talks in Glasgow four years ago. Badenoch has already described reaching net zero emissions by 2050 as fanciful despite the policy becoming law under the previous Conservative government in 2019, and her latest pivot seeks to tap into growing discontent over rising energy bills. The Tory position stands in stark contrast to the Labour government that has vowed to end new licences for oil and gas exploration, arguing they are not compatible with the Paris Agreement goals of limiting global warming and that they would not lower prices.

Badenoch's move comes as the Conservative party is trailing Nigel Farage's populist Reform UK and the ruling Labour party in the polls.

Badenoch, whose position as leader is widely seen as vulnerable less than a year after she took over from Rishi Sunak, has been attempting to stake out a series of more conservative economic positions at a time of concerns over slow growth, rising government debt and higher energy bills.

Ed Miliband, energy secretary, has pledged to make the UK's electricity supply carbon neutral by 2030, which would require huge investment in upgrading the grid and technologies such as offshore wind and carbon capture, utilisation and storage. (...)

The UK oil and gas sector boomed in the 1980s helping fund Margaret Thatcher's reforms of the UK economy. While production peaked more than two decades ago, the industry has warned government policies are accelerating the drop in output from higher taxes to tight development restrictions.

The Department for Energy Security and Net Zero said it remained focused on "delivering the manifesto commitment to not issue new licences to explore new fields", arguing new discoveries would "not take a penny off bills, cannot make us energy secure, and will only accelerate the worsening climate crisis".

Text 9 - Nigel Farage is right: net zero is the new Brexit

Pollsters claim that the British public 'overwhelmingly supports' radical policies to tackle climate change. Are they sure?

The Telegraph, [Michael Deacon](#), Columnist, 22 April 2025

Every now and then, I find myself thinking that [Nigel Farage](#) has missed his true calling in life. All right, so he's enjoyed a fair amount of success as a politician. None the less, there's a job that I believe might have fitted his particular skills even better.

Newspaper editor.

Admittedly, now that the boozy Fleet Street lunch is a thing of the distant past, I don't suppose he'd be interested. All the same, he'd have been well suited to the job, because he possesses an almost uncannily sharp news sense. That is, he has a special knack for identifying issues that matter to ordinary people yet have been missed or dismissed by those who grandly assume they know better. Free movement, for example, or the small boats. He was banging on about these problems long before most of his rivals grasped the true scale of their salience. In short: like an experienced editor, he always seems to know what the next big story is going to be.

All of which is why I think it would be a grave mistake for his opponents to ignore his latest comments about [net zero](#).

Speaking to the *Sun on Sunday*, Mr Farage said: "This could be the next Brexit, where Parliament is so hopelessly out of touch with the country."

The Reform leader's foes seem convinced that, in fact, he's the one who's out of touch. Look at the polls, they scoff. According to the *Observer*, "Polling experts believe the attacks on net zero could backfire on Reform", because "the policy is overwhelmingly supported by the public".

Hmm. I wouldn't be so sure. Many people may indeed have told pollsters that they support net zero. But are we quite certain that they meant it?

Personally, I tend to feel that, if you really want to know whether the public supports net zero, the question to ask is not, "Do you support net zero?" Instead, the question to ask is: "To help achieve net zero, what sacrifices would you personally be willing to make? Would you be willing to give up flying? How much more would you be willing to pay in green taxes? Exactly how much poorer are you willing to be? And, given that Britain is responsible for less than one per cent of the planet's annual greenhouse gas

emissions, how much difference do you think it would make to global temperatures even if this country somehow achieved net zero tomorrow? Oh, and before you answer: did you see the *FT* headline from February, which read: ‘China’s Construction of Coal-Fired Power Plants Reaches Highest in a Decade’?”

Even asking those questions, however, wouldn’t necessarily lead us to the truth. Because public opinion isn’t always what it seems.

For years before the EU referendum, polls consistently gave the impression that the British public had very little interest in the EU, one way or the other. A week before the 2015 general election, for example, Ipsos asked the public

what it considered to be the most important issues facing Britain. The EU didn’t even make the top 10.

Yet, just a little over one year later, 17.4million people voted to leave the EU. This suggests one of two things. Either a very large number of voters had always held rather stronger views about the EU than they were willing to admit to pollsters. Or, once they were finally forced to consider the issue in real depth, they swiftly formed views that were an awful lot stronger than the ones they’d held before.

Either way, it turned out that the polls weren’t telling the whole story. So when Mr Farage says that net zero could be “the next Brexit”, I suspect that’s what he really means.

PART THREE- The Trump Administration’s attacks on climate science

Document 10



Text 11 - EPA websites now downplay link between humans and climate change

CNN, December 11, 2025 By Ella Nilsen, Andrew Freedman

The Environmental Protection Agency has altered and removed information from its website that connected climate change to the burning of fossil fuels.

The changes come as the Trump administration tries to supercharge US oil and gas production and resurrect the coal industry. Now, the EPA’s webpage detailing the ‘causes of climate change’ no longer lists human activities such as burning oil, gas and coal — the key drivers of a warming climate since the industrial revolution.

In some cases, the agency has left information that implies the existence of human-caused climate change, while removing direct references to that fact. Other EPA webpages, including one explaining the ‘future of climate change,’ still mention the link between humans burning fossil fuels and a changing climate.

The ‘causes of climate change’ page, for example, now reads, “Natural processes are always influencing the earth’s climate and can explain climate changes prior to the Industrial Revolution in the 1700s,” before listing such issues as changes in Earth’s orbit, variations in solar activity and volcanic activity. “However, recent climate changes cannot be explained by natural causes alone.”

Previously, that webpage contained an entire section on the human causes of climate change and cited the UN Intergovernmental Panel on Climate Change’s statement that “It is unequivocal that human influence has warmed the atmosphere, ocean and land.” That section is now missing.

Changes to the site were made sometime after early October, according to Internet Archive's webpage archive website Wayback Machine.

In addition, the agency's webpages on 'climate change indicators' are no longer active. This was a popular resource among educators since they detailed how climate change was affecting the United States. Other federal agencies have also made changes to climate-related websites, such as the discontinuation of climate.gov earlier this year. The changes have alarmed climate scientists.

"This isn't just about data on a website; it's an attack on independent science and scientific integrity," Rachel Cleetus of the Union of Concerned Scientists said in a statement.

Phil Duffy, chief scientist at Spark Climate Solutions, called the changed webpages "misleading," and took aim at the altered page on the causes of climate change. "This is like a website on causes of chest pain that mentions indigestion but not heart attack: it leads to the wrong treatment," he said.

Daniel Swain, a climate scientist with UC Agriculture and Natural Resources, also told CNN the bigger problem is not the pages that have disappeared, but the ones like 'causes of climate change' that have been modified "so that it is no longer accurate." "The fact that a government agency would do that on their public facing website and make that choice within the past week or so, according to the timestamps, to change content that was previously correct and make it wrong, according to the overwhelming volume of scientific evidence, is highly concerning," Swain said.

In a statement, an EPA spokesperson said it is no longer focused on protecting "left-wing political agendas."

The "agency no longer takes marching orders from the climate cult," an EPA spokesperson said in a statement. The spokesperson said the agency is committed to "uphold gold-standard science at the Trump EPA" and "previous iterations of the website that do not meet those standards are archived and available to the public." (542 words)

Text 12 - : Supreme Court strikes down EPA rules on discharge of water pollution

The Washington Post, March 4, 2025 (abridged)

The Supreme Court on Tuesday struck down rules regulating the discharge of water pollution, narrowing the landmark Clean Water Act in an unusual case that pitted one of the nation's greenest cities — San Francisco — against the Environmental Protection Agency.

In a 5-4 ruling, the justices found that the EPA cannot impose generic prohibitions against violating water quality standards. The ruling could affect businesses and other cities that sit on bodies of water, including New York, Boston and Washington.

San Francisco sued the EPA after the agency found the city in violation of the terms of a 2019 permit required to discharge pollution from its wastewater system into the Pacific Ocean. City officials argued that the EPA had exceeded its authority because the permit rules were so vague that it was impossible to know when they had crossed a line. [...]

The justices rejected the EPA's argument. [...]

San Francisco has an aging treatment plant that combines stormwater and sewage. It can overflow during heavy rains, sending household waste, including fecal water, into outfalls in the Pacific Ocean. The facility serves about 250,000 residents and 250 miles of sewers.

San Francisco said in court that it has spent billions of dollars to upgrade the facility to try to meet pollution benchmarks. It is already facing at least \$313 million in fines from a similar issue with a wastewater facility that empties into the San Francisco Bay. The city said in that case that it would cost a whopping \$10.6 billion to bring that facility into compliance.

The case had divided environmental groups that are often aligned in court with both the EPA and climate-conscious cities such as San Francisco. Some had voiced concerns that the Supreme Court's 6-3 conservative majority would use the case to weaken clean-water regulations nationwide, going even further than San Francisco had requested. Others had brushed aside these concerns, saying the justices could deliver a narrow win for San Francisco rather than a broad ruling that implicated other jurisdictions. [...]

Sam Sankar, senior vice president for programs at the environmental law firm Earthjustice, criticized the justices for adding to the EPA's workload as the Trump administration slashes the agency's staffing and spending levels. President Donald Trump said last week that EPA Administrator Lee Zeldin was considering cutting 65 percent of the agency's workforce, although the White House later clarified that the president was referring to a 65 percent cut in the agency's overall budget. [...]

San Francisco petitioned the Supreme Court to take up the case after the U.S. Court of Appeals for the 9th Circuit sided with the EPA.

Justice Amy Coney Barrett and the court's three liberal justices dissented in part from Tuesday's ruling, arguing that the EPA had the authority to impose generic prohibitions under the terms of the Clean Water Act. [...]

The decision is the latest by the high court to curtail the EPA's ability to regulate pollution. Last summer, the justices temporarily blocked a major agency initiative to regulate air pollution that drifts across state lines. That litigation is continuing to play out in the lower courts. [...]

(517 words)

Text 13 - Countries are gathering for climate negotiations. Here's where the U.S. stands

NPR, November 10, 2025

President Trump began to de-prioritize climate in January, when he withdrew the U.S. from the landmark 2015 Paris Agreement. In that accord, countries agreed to try to limit global warming to 2 degrees Celsius (3.6 degrees Fahrenheit), and ideally less than 1.5 C (2.7 F). The planet is currently on track to warm roughly 2.8 C (5 F) over preindustrial levels by 2100, according to a recent U.N. climate report.

Since the Paris Agreement, the U.S. developed policies to cut climate pollution in ways that would lower future warming. But the Trump administration's sweeping rollbacks to climate policy are affecting those efforts, as well as communities' ability to cope with climate risks, like lengthening extreme heat seasons and increasingly destructive wildfires or floods. Climate experts worry that because the U.S. is setting an example, other countries might pull back on climate goals, too.

Here are six major shifts in U.S. climate policy initiated by the Trump administration.

Rolling back longstanding policies to target climate pollution

In March, the Environmental Protection Agency announced plans to target more than two dozen rules and policies in what the agency called the "most consequential day of deregulation in U.S. history."

One key component of the administration's efforts focuses on attempting to reverse the "endangerment finding," a legal basis for many of the country's climate policies.

In 2009, the EPA labeled carbon dioxide and other greenhouse gasses a danger to public health and welfare. But legal challenges from fossil fuel interests and their allies delayed the finalization of rules to rein in greenhouse gas pollution. Now, the Trump administration wants to eliminate that 2009 endangerment finding, which could make it easier to roll back other climate regulations.

In July, Trump's EPA argued that the country's climate pollution is not harming people and doesn't need to be regulated in the way courts and previous administrations have chosen to do it.

Reconsidering limits on climate pollution from power plants

In June, the Trump administration announced plans to repeal limits on greenhouse gas emissions and other airborne pollutants from the nation's fossil fuel-fired power plants. If the proposal survives expected legal challenges and is finalized, it would eliminate controls on the second-largest source of climate pollution in the U.S., behind transportation.

The administration argues U.S. coal and gas-fired power plants are responsible for about 3% of global greenhouse gases that are heating the planet. It says that number is declining — it was 5.5% in 2005. So, the administration argues, reducing it further would provide little benefit to public health. That ignores that the U.S. is responsible for nearly a quarter of the climate pollution in the atmosphere today—more than any other nation, historically.

Withdrawing support for renewable energy technologies

The Trump administration is taking steps to open up more areas of U.S. land and ocean to increased oil and gas exploration. At the same time, it has been dismantling federal support for wind and solar industries, which it falsely labels as risky and unreliable.

The new GOP spending law ends federal tax incentives for wind and solar, throwing into limbo thousands of projects. The Trump administration has also canceled more than \$13 billion in funds for green energy projects and tried to halt offshore wind projects already under construction. Energy experts say it's too early to know the full impact of these policies, but in the first half of 2025, U.S. renewable investment fell by 36%, according to data from BloombergNEF.

The Trump administration is also targeting subsidies for consumers to buy climate solutions like rooftop solar, efficient heat pumps, and electric vehicles. And it ended a \$7 billion grant program for local solar projects. Federal incentives for rooftop solar, heat pumps, and insulation go away Dec. 31. Tax credits for electric vehicles ended Sept. 30.

Cutting climate-preparedness grants nationwide

The Trump administration has also cancelled grants for climate and environmental initiatives around the country. Grant recipients, contractors and activists say the

moves have thrown into doubt the government's standing as a reliable partner.

Funding cuts have targeted a range of energy projects, as well, from transmission lines to research on capturing carbon from the atmosphere. Jackie Wong, a senior vice president at the Natural Resources Defense Council, said the moves would set back American innovation and competitiveness.

Democratic lawmakers warn that cancelling Energy Department funding risks driving up utility bills and slowing economic growth at a time when new data centers and factories are expected to increase electricity demand for the first time in decades.



A tropical analysis meteorologist works at his station at the National Oceanic and Atmospheric Administration's National Hurricane Center in Miami, Florida, in May 2025. Earlier this year, the Trump administration fired hundreds of NOAA staff and deleted government websites with data on weather and climate.

Chandan Khanna/AFP via Getty Images

Slashing federal support for climate science and removing climate data

The Trump administration has systematically removed climate science and climate scientists from the federal government. One of the administration's targets was the National Climate Assessment, which is the most influential and widely-used source of information about how climate change affects the United States. In April, the Trump administration dismissed those who were working on the next edition of the report. In July, the federal website that hosted the most recent edition went dark.

The administration also slashed funding for climate science research at agencies like NOAA, NASA, and even USDA. The cuts have affected long-standing data collection efforts and datasets, like NOAA's Billion Dollar Disaster analysis, which keeps track of the ballooning costs of climate-worsened disasters like wildfires, hurricanes, hailstorms, and floods. The database was discontinued in May.

Lowering federal support for disaster relief and preparedness

As wildfires, hurricanes and storms get more intense, disasters that exceed more than a billion dollars in damage are on the rise. Many communities rely on federal support to prepare, including building flood protection projects, improving evacuation planning and fortifying hospitals and other vital infrastructure. The Trump administration has cancelled more than \$4 billion in grants from the Federal Emergency Management Agency, leaving many communities scrambling to replace that funding and prevent damage from worsening hazards. The Trump administration has said it wants states to take over disaster preparation.

Text 14 - Trump's climate science cuts: will they have global impact?

www.dw.com, June 5, 2025 (abridged)

When Rachel Cleetus opened her inbox last Monday to find an email from the Trump administration her first reaction was "just deep disappointment."

She was one of nearly 400 scientists and experts dismissed from working on the sixth National Climate Assessment (NCA6), a leading report of climate change's impact on the United States published every four years. [...]

She says the NCA reports, which were first published in 2000 and draw on the latest scientific research, are vital to understanding how climate change is already impacting the economy, infrastructure and people's lives across the country. [...]

Earlier last month, the White House ended funding and fired staff at the US Global Change Research Program (USGCPR), the federal program coordinating the NCA6. [...]

The NCA6 news is the latest in a series of administration decisions over recent months impacting climate science bodies in the US.

In March hundreds of employees were fired from the National Oceanic and Atmospheric Administration (NOAA), one of the world's most important sites of climate and weather research. [...]

Employees have also been fired en masse from the Environmental Protection Agency and the Department of Energy, federal grants have been withheld, and references to climate change have been scrubbed from several federal agency websites.

The administration also stopped NASA's chief scientist at the time from attending a meeting of the Intergovernmental Panel on Climate Change (IPCC) in China. The UN body is responsible for producing the world's leading assessments of climate change and its consequences for humanity, which is used by governments around the world to guide policy.

Some experts say recent decisions in the US are already impacting climate science.

"We have now observed a 10% reduction in data coming from radiosondes (weather balloons) over the USA," said Florence Rabier, director general at the European Centre for Medium-Range Weather Forecasts, emphasizing that as weather knows no borders successful prediction requires data from all over the world. [...]

The US not only has a large and well-established climate research community, it also has incredible geographical and climatological diversity, said Walter Robinson, professor of atmospheric sciences at NC State University in the US. "Therefore, results from NCA6 would be applicable all over the world."

In response to the dismissal of the NCA6 authors, the American Geophysical Union and the American Meteorological Society announced they will join forces to produce more than 29 peer reviewed journals covering all aspects of climate.

The dismissal of NCA authors will not only negatively impact national policies which the report's scientific insights help to guide, but also international collaborations between the US and other regions such as Latin America, Africa, Asia and Europe, said Paolo Artaxo, professor of environmental physics at the University of Sao Paulo. [...]

In addition to the measures he has already taken against climate science, Trump last week proposed significant cuts to the 2026 federal budgets for US scientific agencies and research.

If such budget cuts are sustained then the inevitable results will be "that the 'center of mass' of climate research will move away from the US, to the EU, to China and other OECD nations (UK, Australia, Japan and Korea)," said Robinson.

In Europe, there are also active efforts to attract scientists from across the pond.

On Monday, French president Emmanuel Macron and EU Commission president Ursula von der Leyen hosted a conference exploring — among other topics — financial incentives for researchers in specific sectors, including climate and biodiversity.

While European countries have the scientific capacity and political will to fill some of the gaps left by the NCA6 author dismissal, they are not able to plug them all, explained Sissi Knispel de Acosta, general secretary of the European Climate Research Alliance, a network supporting EU research capabilities. [...] (621 words)

PART FOUR Legal action

Text 15 - UN's top court says failing to protect planet from climate change could violate international law

www.apnews.com, July 24, 2025

THE HAGUE, Netherlands (AP) — The United Nations' top court in a landmark advisory opinion Wednesday said countries could be in violation of international law if they fail to take measures to protect the planet from climate change, and nations harmed by its effects could be entitled to reparations.

Advocates immediately cheered the International Court of Justice opinion on nations' obligations to tackle climate change and the consequences they may face if they don't. [...]

The non-binding opinion, backed unanimously by the court's 15 judges, was hailed as a turning point in international climate law.

Notably, the court said a "clean, healthy and sustainable environment" is a human right. That paves the way for other legal actions, including states returning to the ICJ to hold each other to account as well as domestic lawsuits, along with legal instruments like investment agreements.

The case was led by the Pacific island nation of Vanuatu and backed by more than 130 countries.

All U.N. member states including major greenhouse gas emitters like the United States and China are parties to the court.

U.N. Secretary-General Antonio Guterres welcomed the "historic" advisory opinion. [...]

Climate activists had gathered outside the crowded court with a banner that read: "Courts have spoken. The law is clear. States must ACT NOW." They watched the ruling on a giant screen, clapping and cheering at times during the two-hour hearing. [...]

After years of lobbying by vulnerable island nations who fear they could disappear under rising sea waters, the U.N. General Assembly asked the ICJ in 2023 for an advisory opinion, an important basis for international obligations. [...]

The senior attorney at the Center for International Environmental Law, Erika Lennon, said the ruling also can be used as leverage at the next U.N. climate conference later this year in the Brazilian city of Belém. [...]

The United States and Russia, both of whom are major petroleum-producing states, are staunchly opposed to the court mandating emissions reductions. The Trump administration has again withdrawn the U.S. from the 2015 Paris Climate Agreement and has made it harder to find scientific assessments of how climate change endangers the U.S. and its people. [...]

Simply having the U.N. court issue an opinion is the latest in a series of legal victories for the small island nations. Earlier this month, the Inter-American Court of Human Rights found that countries have a legal duty not only to avoid environmental harm but also to protect and restore ecosystems. Last year, the European Court of Human Rights ruled that countries must better protect their people from the consequences of climate change.

In 2019, the Netherlands' Supreme court handed down the first major legal win for climate activists when judges ruled that protection from the potentially devastating effects of climate change was a human right and that the government has a duty to protect its citizens.

The presiding judge on Wednesday acknowledged that international law had "an important but ultimately limited role in resolving this problem," and said a lasting solution will need the contribution of all fields of human knowledge "to secure a future for ourselves and those who are yet to come." (524 words)

Text 16 - Oil firm TotalEnergies made misleading green statements, court rules

The Guardian, October 23, 2025

A French oil company engaged in "misleading commercial practices" about the scope of its environmental commitments, a court has ruled.

TotalEnergies, which this month said it aimed to "ramp up production of gas", was found on Thursday to have probably misled consumers with claims about its climate policies. The civil court in Paris ordered the company to remove messages from its website that said it wanted to reach carbon neutrality by 2050 and be a big player in the energy transition.

The case, brought by NGOs including Greenpeace France and Friends of the Earth France, is the first time the country's "greenwashing" laws have been applied to a fossil fuel company. Courts in the Netherlands and Germany have already found that airlines misled consumers with vague environmental claims.

The French court gave TotalEnergies a month to take down the misleading statements or face a fine of €10,000 (£8,700) a day. It was also ordered to post the court's ruling on its website, with the same penalty for noncompliance, as well as to pay €8,000 to each of the three NGOs and €15,000 for their legal costs.

"The French justice system is finally tackling the impunity of fossil fuel greenwashing that Total has enjoyed until now," said Justine Ripoll, campaigns manager at Notre Affaire à Tous, one of the NGOs that brought the case. "It sends a clear message: climate disinformation is not an acceptable business strategy."

TotalEnergies said it acknowledged the court's judgment and added that most of the claims against it were dismissed. The company, which has an installed renewable capacity of 35GW and is aiming for 100GW by 2030, said

the judgment does not target any of TotalEnergies Electricité et Gaz France's advertising campaigns concerning offers to consumers in France, but only targets general statements on the website of the parent company, TotalEnergies SE.

The company, which aims to achieve 100 gigawatts of renewable power generation by 2030 but has made fossil gas a "cornerstone" of its strategy, has said it was a multi-energy company aiming to "responsibly, cost-effectively and sustainably produce the energy that we all need in our daily lives".

The ruling is the result of a legal action brought by NGOs in 2022 in response to a campaign when the company changed its name from Total.

The court ordered TotalEnergies to remove statements that said it placed sustainable development at the heart of its strategy and that it "contributed to the wellbeing of populations" in line with the UN's sustainable development goals.

Judges dismissed a further accusation of greenwashing over the company's claims about fossil gas and biofuels. The court found that although the statements contained some disputed claims, they were for informational rather than commercial purposes.

Climate activists and green groups have increasingly taken fossil fuel companies to court for environmental claims that do not align with published climate science.

In a landmark report in 2022, the Intergovernmental Panel on Climate Change found that the world had enough existing and planned fossil fuel infrastructure to blow past the goal of limiting global heating to 1.5C above preindustrial levels. Meanwhile, the International Energy

Agency found that “no new oil and gas” exploration was compatible with its key scenario for keeping planetary heating to that level.

Jonathan White, a lawyer for ClientEarth, which supported the NGOs, said TotalEnergies appeared to be continuing with oil and gas projects despite warnings from climate experts.

“This landmark judgment sends a clear warning shot to other oil and gas majors in Europe and beyond,” he said. “Claiming to be part of the transition while backing new fossil fuel projects comes at a tried-and-tested legal price.” (605 words)

Text 17 - Collège de France : interdiction formelle de critiquer TotalEnergies ?

www.franceinfo.fr, 24 octobre 2025

Comme de nombreux établissements, le Collège de France cherche des financements pour boucler ses budgets. L'institution a ainsi signé des contrats de mécénat avec plusieurs partenaires, dont TotalEnergies : 2 millions d'euros pour financer des conférences sur le changement climatique.

Le Collège de France a longtemps refusé de dévoiler le contrat qui le relie à la multinationale. Mais un professeur dans un lycée lillois a réussi à le récupérer, en faisant une demande au Ministère de l'Enseignement supérieur dans le cadre d'un projet éducatif.

Nous avons analysé ce contrat. Une clause a retenu notre attention : *"Les parties s'abstiendront de faire toute communication susceptible de porter atteinte à l'image et à la notoriété de l'autre partie."* En contrepartie de ce financement, l'institution Collège de France a donc interdiction de critiquer TotalEnergies.

Ce contrat a été co-signé par un chimiste renommé, Marc Fontecave, professeur au Collège de France depuis dix-sept ans. Récemment, l'une de ses prises de parole a créé la polémique. C'était à la fin d'une table ronde, co-financée par TotalEnergies. Nous avons récupéré l'enregistrement d'un passage qui n'a pas été diffusé. Marc Fontecave y relativise l'urgence à agir face au réchauffement climatique : *"L'urgence, au fond, ça nous dit qu'il y a une date que nous savons, où la fin du monde est proche, où c'est la catastrophe, etc... En fait, cette date, on ne la connaît pas et c'est pour ça qu'il faut peut-être modérer un peu cette notion d'urgence."*

Un propos à contre-courant du consensus scientifique sur le sujet, qui a profondément heurté une des intervenantes. Elle a accepté que nous citions ses propos. Voilà ce qu'elle nous a confié anonymement au téléphone : *"La façon dont il s'est exprimé montre très clairement qu'il avait besoin d'amener un contre-discours en balayant tout ce qui avait été dit. Et il est parti comme ça et on n'avait pas le droit de répondre."*

Marc Fontecave connaît bien Total. Le groupe pétrolier finance une partie de ses recherches au Collège de France sur la transformation du CO2. Nous avons contacté, pour lui poser cette question : *"Peut-on parler librement de la transition écologique tout en étant financé par Total ?"*. Réponse de l'intéressé : *"Je ne vois pas le problème. On peut parler librement de la transition énergétique dans cet établissement et c'est ce qu'on fait."*

Cette clause interdisant de critiquer TotalEnergies n'a rien d'exceptionnel, nous assure le Collège de France. Elle a été insérée dans le contrat d'un commun accord avec Total. Au siège du groupe, à La Défense, c'est la directrice France de TotalEnergies en personne qui nous a reçus. *"Quand vous regardez dans tous les partenariats de mécénat que nous avons, cette clause est systématique et donc nous avons signé la clause qui était dans le contrat de mécénat avec le Collège de France"*, confie Isabelle Patrier.

Mais aujourd'hui, un chercheur peut-il être financé par Total et en même temps mettre en cause Total et les énergies fossiles ? *"Les chercheurs du Collège de France, si demain ils souhaitent montrer l'impact du réchauffement climatique par les énergies fossiles, ils peuvent librement le faire"*, répond-elle.

Quant au Collège de France, il répond que l'interdiction de critiquer Total ne concerne que les communications officielles et n'entrave pas les productions scientifiques ni la liberté d'expression des chercheurs.

PART FIVE – Scientific innovation and climate action

Text 18 -: The hottest thing in clean energy

Alexander C. Kaufman, [The Atlantic](#), 4 April 2025 (abridged)

[...] In the United States, geothermal energy, which uses the Earth's heat to create electricity, supplies less than half of 1 percent of the country's electricity, but few other clean-energy sources offer as much promise right now. Many climate activists support geothermal energy as a renewable power source that generates zero-carbon electricity. A recent report from the Rhodium Group, an energy-research firm, projected that geothermal could meet as much as 64 percent of new electricity demand from data centers by the early 2030s. America is far behind rivals such as China and Russia in manufacturing solar panels or building nuclear plants. But geothermal makes use of an area of the U.S. industrial base that has grown in recent years—oil and gas production.

Cindy Taff, whose company, Sage Geosystems, is anticipating geothermal's potential growth, told me about a recent drive she took through southern Texas that illustrated that overlap. "The same drilling rig that drilled our well in September was on a lease right off the highway drilling an oil-and-gas well," she said, laughing. "It's just the same."

Taff came from the oil industry: She was once a vice president at Royal Dutch Shell who commanded a team of 350 employees using hydraulic fracturing (better known as fracking) to drill their way through five countries' bedrock. Fracking had driven an oil-and-gas boom starting in the mid-2000s, and her team had looked at using the same technique to tap the Earth's underground heat. At Shell, "we never actually drilled wells" to try it on geothermal energy, she told me. "It was frustrating." The opportunity looked big enough to her that she started Sage.

Much like oil and gas, geothermal energy, which harnesses the planet's molten core to make steam, had long been confined to the places where access came easy—the American West, where Yellowstone's famous geysers hint at the heat below, or volcanic Iceland. In those places—generally volcanic hot spots where magma flows at shallow depths in the Earth's crust and underground water reservoirs—geothermal energy can be a substantial source

of power. Currently, it provides roughly 10 percent of Nevada's electricity generation and as much as 5 percent of the power California produces; Iceland generates 30 percent of its electricity, and Kenya nearly half, from geothermal. Traditional coal or nuclear plants generate heat to turn water into steam, which spins turbines to make electricity. Geothermal power stations do the same using hot water from underground reservoirs.

Sage uses fracking technology to crack open hot rocks even deeper underground, enabling access to heat in more locations. The company's drillers then inject water into the well, prying open the stone fissures and creating an artificial reservoir. When Sage releases that water, the pressure from underground shoots it upward, and the heat creates vapors that spin turbines and crank out electricity. This system can also serve as storage for weather-dependent wind and solar: Extra electricity from turbines and panels can pump water into Sage's wells that can be released later to produce electricity.

Sage expects to have its first energy-storage facility up and running in Texas in the coming weeks, but already has a deal to sell power to Meta's data centers. And a similar start-up, Fervo Energy, demonstrated that it could use fracking technology to successfully produce 24/7 carbon-free energy back in 2023, at a pilot project in Nevada.

Geothermal does have certain advantages compared with other sources of renewable energy. Solar and wind need large areas of land, huge volumes of minerals, and a massive new network of transmission lines. (Plus, China dominates those industries' supply chains.) Hydroelectric dams are less dependable in a world where water is growing scarcer and precipitation harder to forecast. Nuclear reactors cost billions of dollars and take years to build; the U.S. depends heavily on countries such as Canada, Kazakhstan, and Russia for uranium fuel, and has yet to establish the infrastructure to either permanently store or recycle nuclear waste. [...] (656 words)

Text 19 - New technologies can spot pesky leaks in water pipelines

The Economist, Sep 25th 2024

IN JUNE, BLISTERINGLY hot temperatures and a prolonged dry spell plunged much of southern Italy into its worst drought in decades. Water shortages on glitzy Capri became so dire that local authorities temporarily banned ferries from offloading tourists on to the island. A lack of rainfall tells only half the story. Decrepit infrastructure is as

much to blame, with over 40% of Capri's drinking water seeping out through leaks in its pipe network before it reaches customers.

On Capri's neighbouring islands of Ischia and Procida, however, new monitoring technology designed to spot water leaks kept the leakage rate closer to 20%. Xylem, an American firm, first began monitoring the pipes that connect the islands with the mainland in 2019 using its "SmartBall" and "Sahara" systems. The SmartBall is a tennis-ball size tool that travels through water pipes freely, whereas Sahara is tethered. Both come with acoustic sensors to identify the distinctive hissing sound of a leak, and GPS connectivity to pinpoint exactly where they are. Subsequent repairs to cracks identified by Xylem saved Ischia 50 litres of water per second, equivalent to a third of the island's consumption. Such methods could have similarly dramatic consequences elsewhere.

Leaky water pipes are a global problem. EurEau, an umbrella group of water suppliers, reckons that the rate of lost water in Europe (nearly all due to pipe leaks) stands at 25%. Some countries, such as the Netherlands and Germany, have kept losses to single figures through spending on maintenance, but in places like Bulgaria the rate is thought to be near 60%. Leakage figures in America are comparable to those in Europe. Although good data are hard to come by in poor countries, experts believe the issue is even more pressing there.

Tackling the problem will not be easy. For one thing, the global network of water pipes is enormously long: over 4m kilometres of drinking-water pipes criss-cross Europe, enough to wrap around the Equator a hundred times. The pipes are also underground, which makes it harder to spot problems. (...)

The good news is that water utilities are increasingly turning to new technology to monitor water consumption, identify leaks and carry out repair work. The tools Xylem used on Ischia rely on in-pipe leak detection, but this is not the only game in town. There has also been a huge increase in demand for acoustic tools that operate from outside pipes, says Uri Gutermann, the CEO of Gutermann, a major provider of this kind of equipment.(...)

Satellite imagery offers another way to spot leaks. Other innovative ideas look set to hit the market soon. How much such tools will cost remains unclear. Gutermann and others claim that they pay for themselves very quickly, as utility companies gain the ability to charge customers for water that would otherwise be lost. That is undoubtedly true over the longer term, but cash is still needed upfront to finance the investment.

For now, no single technology offers a perfect solution: SmartBalls can get lost; satellite imagery can be fuzzy; and robots still require human operators, which increases costs. But these are minor quibbles. More accurate information about how pipe networks actually function will be vital to making the most of the world's supplies of drinking water.

(549 words)

Text 20 - Trees are a quieter way to cool our cities

Carlo Ratti

The Financial Times, AUG 21 2025

The writer is a professor at MIT and Politecnico di Milano, and director of Venice's 2025 Biennale Architettura

The trite seasonal headline is back: Europe is again gasping under record heat, with several countries experiencing their hottest periods on record. So how do we cool our cities? For many, the reflex is air conditioning (AC). But before rushing to install more cooling units, we may want to consider a humbler, quieter solution: trees.

As the climate changes rapidly, some argue that AC should no longer be seen as a luxury, but a lifeline. Once indoor temperatures exceed 23C, sleep, health and productivity all falter. The disparity in access to it is deadly. Between 2000 and 2019, Europe experienced an average of 83,000 heat-related deaths a year — more than four times the number in North America where AC is more common. Clearly, it can save lives. But it is a lifeline with a frayed rope.

First, it strains the power infrastructure. In the last two weeks of June 2025, demand for cooling caused electricity use in the EU to jump 7.5 per cent year-on-year. The consequences were visible. On July 1, the Italian cities of Florence and Bergamo experienced widespread blackouts during a severe heatwave. People were trapped in lifts and shops shut as payment systems failed. We are cooling ourselves into gridlock.

AC also bakes our streets — venting waste heat outside intensifies the heat island effect. The cooler we keep our interiors, the hotter we make our public spaces. The effects on the urban climate are especially harsh for those without access to cooling, widening inequality.

Nature can offer a better way. We have long known that trees have an important effect on the urban environment. They provide shade, but also lower air temperatures through evapotranspiration. Yet comprehensive data on greenery’s cooling potential has been scarce. Thermal studies have been limited, partly due to the difficulty of analysing large volumes of data.

Artificial intelligence is changing this. Our MIT team, together with the Dubai Future Foundation, has used AI and thermal imaging to measure how vegetation affects urban microclimates. In 2025, we collected data in Los Angeles, Dubai, Amsterdam and Boston, scanning streets and public spaces to assess how greenery performs.

We showed that trees maintain a cooler temperature than the surrounding urban surfaces as much as 15 degrees in the hottest times of the day. But not all plants are created equal. Shrubs and grass provide minimal cooling. Trees with dense canopies perform far better in many locations

Placement is critical, too. Trees planted alongside buildings deliver more comfort than those in wide-open parks. In Amsterdam, mature deciduous trees flanking narrow streets cooled their surroundings by up to 5°C. Taken together, our findings begin to form a “cooling catalogue” — a data-driven guide for planting the right trees, in the right places, for maximum climate impact.

Yes, trees have their own demands: water, competition with underground infrastructure, patience. In historic cities, canopies require lengthy consultations — in Paris, plans to expand greenery next to Notre-Dame met a tangle of nostalgia and horticultural arguments.

Yet, in a hotter world, trees should be considered more than decoration. This ancient infrastructure can cool not just our buildings but the cities themselves. And with AI, we can now plant better, with precision urban forestry. In a warming world, the smartest climate tech may be rooted in the ground — and it doesn’t strain the power grid.

(564 words)

Document 21 - Video - Farmers turn to seaweed in attempt to reduce methane emissions from livestock

PBS, April 2025

<https://www.youtube.com/watch?v=b6Sif5T7LR8>

Stop the video at 5’45

Document 22 - Audio: To ease the energy crisis, we're going to need better batteries

<https://www.npr.org/2025/02/28/1234443286/battery-california-energy-electricity-renewable-energy>

The audio and video documents are on the class’s website:

MORE ON THE TOPIC:

▶ <https://www.npr.org/series/g-s1-84645/hurricane-katrina-anniversary>

▶ <https://www.youtube.com/watch?v=VI6VhCAeEfQ>

▶ Series: “The Silo”, “Paradise”

▶ Films: “Twister” (1996), “The Day After Tomorrow” (2004), “The Impossible (2012), “Interstellar” (2014), “Don’t Look up” (2021)