The Climate Crisis: Latest Science Update

A snapshot of recent findings and developments — September 2026

Temperatures Staying Near Record Highs

The World Meteorological Organization's latest Global Annual to Decadal Climate Update warns that global temperatures are likely to remain at or near record levels through 2029, sharply escalating risks for societies and economies. The UK Met Office expects 2026 to rank among the four warmest years on record, with warming projected around 1.46°C above pre-industrial levels — which would make it the fourth consecutive year above 1.4°C. Former NASA climate scientist James Hansen has separately reiterated concern that climate sensitivity is being underestimated, suggesting 2026 could still become the warmest year on record despite a cooler start than 2024.

Source: WMO Global Annual to Decadal Climate Update; UK Met Office; Inside Climate News, June 2026

Oceans Hotter Than in at Least 1,000 Years

A study published in Advances in Atmospheric Sciences, led by the Chinese Academy of Sciences, finds that ocean heat content set another record in 2025, with oceans now the hottest they have been in at least 1,000 years and warming faster than at any point in the past 2,000 years. Since oceans absorb more than 90% of the heat trapped by greenhouse gas emissions, ocean heat content is considered one of the starkest indicators of the climate crisis. The Asia-Pacific and Southeast Asian regions have seen some of the largest heat extremes.

Source: Pan, Y., Cheng, L., Abraham, J. et al., 'Ocean Heat Content Sets Another Record in 2025,' Advances in Atmospheric Sciences (2026)

Climate Tipping Points: A Widening Warning

A growing body of 2026 research suggests several Earth-system tipping points are closer, or already being crossed, than previously thought. A review led by the University of Exeter, the Potsdam Institute for Climate Impact Research, and the Centre for International Climate Research finds that up to eight climate tipping points could be triggered below 2°C of warming, and that global warming is increasingly likely to exceed 1.5°C in the late 2020s or 2030s. Separately, research in Science Advances found that a key ocean circulation system is slowing faster than assumed, projecting a 51% slowdown by 2100 versus the 32% figure many climate bodies have relied on. Warm-water coral reefs are widely cited as the first Earth system to have already crossed a tipping point, following the largest coral bleaching event on record between 2023 and 2025, which damaged 84% of reefs across 83 countries.

Source: University of Exeter / PIK / CICERO tipping points review (2026); Science Advances; Global Tipping Points Report 2025

Amazon Rainforest: More Resilient, But Still at Risk

Three separate 2026 studies paint a more nuanced picture of the Amazon than earlier fears of imminent collapse. A Nature study (April 2026) found the forest regrows faster than expected after disturbance, though full biodiversity recovery takes much longer. A PNAS study, based on two decades of research,

found the Amazon is more resilient to fire than assumed and shows no current sign of transitioning to savanna. However, researchers caution that the new, recovering ecosystems are more vulnerable to future climate shocks, and that a system-wide tipping point could still be triggered within the next 15 years if deforestation and warming continue. Repeated wildfires are also replacing fire-resistant tree species with generalist species, roughly halving biodiversity at forest edges even as canopy cover recovers.

Source: Studies in Nature and PNAS (April 2026); reporting via Mongabay, August 2026

New Findings on Arctic Clouds and Ancient Warming Events

Scientists have identified a previously unrecognized Arctic process, dubbed a natural cloud-forming mechanism, where sunlight reacts with chemicals released by sea ice, ocean water, and algae to boost cloud-forming particles near melting ice — a factor missing from current climate models. Separately, a study in Proceedings of the National Academy of Sciences examined a rapid warming event from roughly 304 million years ago during the Late Paleozoic Ice Age, finding that a modest initial temperature spike triggered a much larger one driven by methane released from thawing permafrost — offering a possible ancient analogue for feedback risks today.

Source: ScienceDaily, August 2026; University of Cincinnati / PNAS, August 2026

Policy and Scientific Infrastructure Under Strain

The 2026 Doomsday Clock statement from the Bulletin of the Atomic Scientists describes the current U.S. policy rollback on climate as the most aggressive and consequential the Climate Action Tracker has ever analyzed, including proposed halts to greenhouse gas and environmental data collection (including NOAA's Mauna Loa CO2 monitoring and NASA's OCO-2/OCO-3 satellites) and threats to major climate modeling centers. The U.S. has also withdrawn from the IPCC and IPBES, which the UN University describes as a significant setback for international scientific collaboration. At COP30 in Belém, Brazil, the summit's final text acknowledged for the first time that the world may overshoot the 1.5°C target, while stopping short of firmly endorsing the IPCC as the 'best available science' on climate.

Source: Bulletin of the Atomic Scientists, 2026 Doomsday Clock Statement; UN University; COP30 Belém outcome text

Human Health Signals

New research reported by ScienceDaily suggests rising atmospheric CO2 may be leaving a detectable imprint inside the human body, an early but notable signal in the growing field connecting atmospheric chemistry to human physiology.

Source: ScienceDaily, August 2026

Note: This is a snapshot compiled from recent web-search results on 6 September 2026 and is not a substitute for the underlying peer-reviewed studies or official assessment reports (e.g. IPCC, WMO). Figures and projections are attributed to the cited sources and may be revised as further research and data collection continue.