

# Five-year period ending 2019 set to be hottest on record

22 September 2019, by Issam Ahmed



The sun sets behind the skyline of midtown Manhattan in New York City—rather than falling, the world's carbon dioxide grew two percent in 2018

A damning new UN report published Sunday said the world is falling badly behind in the race to avert climate disaster because of runaway warming, with the five-year period ending 2019 set to be the hottest ever.

It comes ahead of a major UN climate summit Monday that will be attended by more than 60 world leaders, as Secretary-General Antonio Guterres pushes for countries to increase their greenhouse gas reduction targets.

The report "highlights the urgent need for the development of concrete actions that halt global warming and the worst effects of climate change," said its authors, the Science Advisory Group to the summit.

Average global temperature between 2015-2019 is on track to be the hottest of any five-year period on record, according to the report compiled by the World Meteorological Organization.

The period "is currently estimated to be 1.1 degrees Celsius above pre-industrial (1850-1900) times and 0.2 degrees Celsius warmer than 2011-2015," it said.

The past four years were already the hottest since record-keeping began in 1850.

Guterres said last week the world was "losing the race" on climate change, and the latest report spells out the extent to which the gap between what is required and what is happening is widening.

Rather than falling, carbon dioxide grew two percent in 2018, reaching a record high of 37 billion tonnes.

More importantly, there is also no sign yet of reaching what is known as "peak emissions," the point at which levels will start to fall, though these are not growing at the same rate as the global economy.



People walk on a hot day in Tokyo, in August 2019—average global temperature between 2015-2019 is on track to be the hottest of any five-year period on record, a UN report says

The 2015 Paris Agreement saw countries lay out national targets to reduce their emissions in order to limit long term temperature rise by under two degrees Celsius or ideally 1.5 degrees Celsius above pre-industrial levels.

These are benchmarks that will limit in important ways the impact of warming on world weather systems.

But even if all countries meet the goals they set themselves, the world will warm by 2.9 degrees Celsius to 3.4 degrees Celsius, the report found.

The current levels of ambition would need to be tripled to meet the two degrees Celsius goal and increased five-fold to meet the 1.5 degrees Celsius goal—technically still possible.

"This reads like a credit card statement after a five-year long spending binge," said Dave Reay, a professor and chair in Carbon Management at the University of Edinburgh.

"Our global carbon credit is maxed out," he added. "If emissions don't start falling there will be hell to pay."

### Deadly Heatwaves

In 2018, global carbon dioxide was 407.8 parts per million (ppm), 2.2 ppm higher than 2017 and set to reach or exceed 410 ppm by 2019.

"The last time Earth's atmosphere contained 400 parts per million CO<sub>2</sub> was about 3-5 million years ago," the report said.

Map of climate protests planned during Global Climate Action Week (Sept 20-27)

At that time, global mean surface temperatures were two-to-three degrees Celsius warmer, ice sheets at both poles had melted, and seas were 10 to 20 meters higher.

Other major takeaways include that the extent of Arctic summer sea ice has declined at a rate of 12 percent per decade over the past 40 years, with the four lowest values between 2015 and 2019.

Overall, the amount of ice lost from the Antarctic ice sheet increased by a factor of six each year between 1979 and 2017, while glacier loss for 2015-19 is also the highest for any five-year period on record.

Sea-level rise is also accelerating as is the process of acidification.

The report also found that heatwaves were the deadliest weather hazard in the 2015-19 period, affecting all continents and setting new national temperature records.

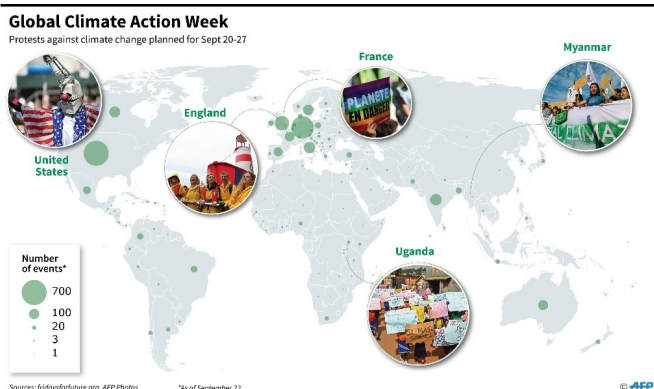
The summer of 2019, which included the hottest ever month on record, July, saw unprecedented wildfires in the Arctic.

In June, these were responsible for emitting 50 megatons of carbon dioxide.

The report also comes at a time of increasing mobilization over the question of climate change, with millions taking part in a youth-led global strike Friday, before the first UN youth climate summit on Saturday.

On Sunday, 87 major companies with a combined market share of \$2.3 trillion committed to set climate targets in line with the 1.5 C goal.

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