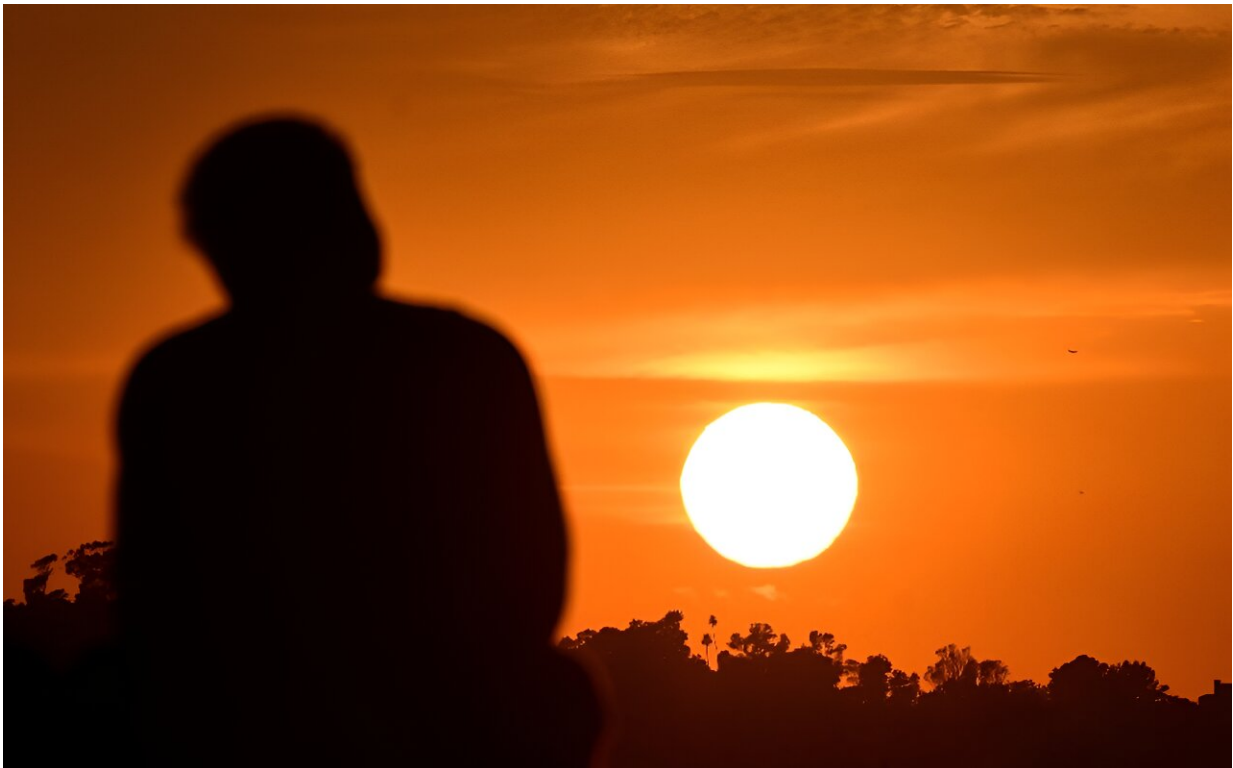


# 'Human-induced' climate change behind deadly Sahel heat wave: Study

April 18 2024

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Sunset in Los Angeles, California, in July 2023.

The deadly heat wave that hit Africa's Sahel region in early April would

not have occurred without human-induced climate change, according to a study by the World Weather Attribution (WWA) group [published](#) Thursday.

The West African nations of Mali and Burkina Faso experienced an exceptional [heat wave](#) from April 1 until April 5, with soaring temperatures above 45 degrees Celsius (113 degrees Fahrenheit) triggering many deaths.

Observations and [climate models](#) used by researchers at the WWA showed that "heat waves with the magnitude observed in March and April 2024 in the region would have been impossible to occur without the global warming of 1.2C to date", which scientists attribute to human-induced climate change.

While periods of high temperatures are common in the Sahel at this time of year, the [report said](#) that the April heat wave would have been 1.4C cooler "if humans had not warmed the planet by burning fossil fuels".

It added that the five days of extreme heat was a once-in-a-200-year event, but that "these trends will continue with future warming".

The length and severity of the extreme heat led to an increase in the number of deaths and hospitalizations in the two countries, despite their populations being acclimatized to high temperatures, the WWA said.

## **Deaths in heat wave**

A lack of data in the affected countries made it impossible to know the exact number of deaths, the WWA said, adding there were likely hundreds, if not thousands, of other heat-related casualties.

"From April 1 to 4, we saw an increase in the use of services," Djibo Mahamane Diango, head of anesthesia at Gabriel Toure hospital in the capital Bamako, told reporters on April 5.

He said the hospital had seen the arrival of 102 bodies—more than half of them people aged over 60—during the first four days of this month.

That compares with 130 for the whole of the month of April the previous year, he added.

The April heat wave in Mali—where the temperature spiked at 48.5 degrees Celsius—and neighboring Burkina Faso coincided with the holy month of Ramadan when Muslims fast from dawn until dusk.

It also came during [power outages](#) which restricted the use of fans and [air conditioning](#) and affected health services.

The national blood transfusion center in Bamako had called on medical centers to suspend any non-essential transfusions because of daily power shutdowns lasting more than 12 hours a day.

Mali often suffers from electricity cuts partly due to the state of disrepair of its power stations.

Countries in the Sahel region have had to contend with drought since the 1970s, as well as periods of intense rainfall from the 1990s.

The dwindling availability of water and pasture, compounded by the development of agricultural land, has disrupted the lives of pastoral populations and encouraged the emergence of armed groups that have extended their hold over vast swathes of territory in Mali, Burkina Faso and Niger.

**More information:** C Barnes et al, Extreme Sahel heatwave that hit highly vulnerable population at the end of Ramadan would not have occurred without climate change, *Imperial College London* (2024). [DOI: 10.25561/110771](https://doi.org/10.25561/110771)

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