

CLIMATE CHANGE CAUSING EXTREME HEAT WAVE IN EUROPE

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*(Views expressed in the brief are those of the author, and do
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Background

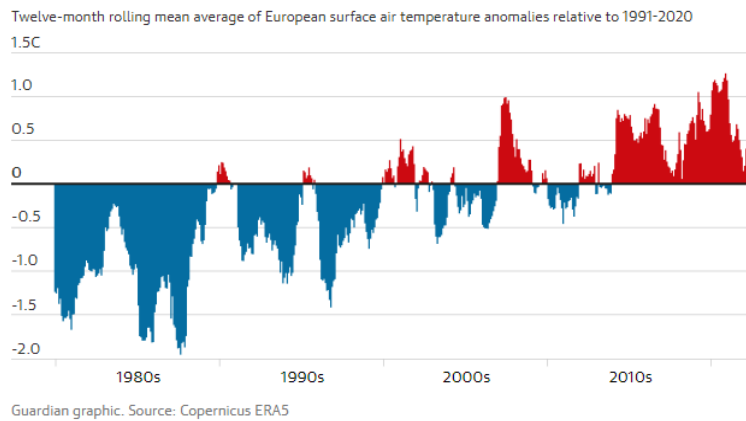
Since June 2022, persistent heat waves have affected parts of Central, Southern, and Western Europe, causing wildfires. In June, temperatures between 40–43°C were recorded throughout most of Europe with hundreds of daily, monthly, and all-time temperature records broken throughout the continent. The countries that have been impacted include Croatia, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Spain, Switzerland, and the UK. The climate crisis is playing a clear role in making heat waves more intense and more likely.¹

The heat wave is due to a high-pressure system called the Azores High, which usually sits off Spain, has grown larger and pushed farther north, bringing high temperatures to the UK, France, and the Iberian Peninsula. Climatologists have linked the extreme heat to the impact of climate change, and experts predict that changes in the jet stream because of climate change will cause heat waves with increasing frequency in Europe.²

1 Ian Livingston, "Historic June heat wave smashes records in Europe," The Washington Post, June 20, 2022, <https://www.washingtonpost.com/climate-environment/2022/06/20/france-germany-spain-europe-heatwave/>

2 Damian Carrington, "Why is it so hot in the UK and elsewhere in Europe and what are the dangers?" The Guardian, July 11, 2022, <https://www.theguardian.com/environment/2022/jul/11/why-so-hot-uk-europe-dangers-climate-crisis>

European annual temperatures have been rising since the 1970s - 2020 was the warmest calendar year on record



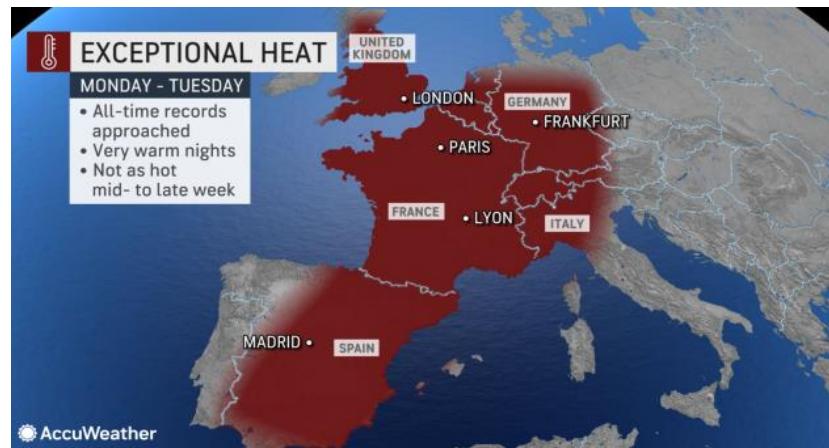
Impact

The heatwave in Europe has fuelled ferocious wildfires in Spain and France, where more than a dozen local temperature records have been broken. Authorities across southern Europe are battling to control huge wildfires in countries including Spain, Greece, and France, with hundreds of deaths reported. More than 1,000 deaths have been attributed to the nearly week-long heatwave in Portugal and Spain so far. In France, wildfires have now spread over 11,000 hectares in the southwestern region of Gironde. Wildfires in France, Portugal, Spain and Greece have forced thousands of people to evacuate their homes. Swirling hot winds complicated firefighting in the region. Firefighters are continuing to douse the areas with water from the ground and the air in an effort to try and dampen the soil, so the wildfires don't restart.³

British authorities described the heat wave as a national emergency and portions of the nation are under an extreme heat warning for the first time. At least four people were reported to have drowned across the UK in rivers, lakes and reservoirs while trying to cool off. There were severe travel disruptions with trains cancelled and flights at London's Luton Airport suspended when part of the runway buckled under the searing heat. Nearly half of Europe's territory, including the UK, is at risk of drought, according to researchers at the EU Commission.⁴

³ Guillermo Martinez, "Climate change affects everyone': Europe battles wildfires in intense heat," Aljazeera, July 18, 2022, <https://www.reuters.com/business/environment/spain-portugal-battle-wildfires-heatwaves-scorch-southern-europe-2022-07-17/>

⁴ Joseph Ataman, "Extreme heat sears parts of Europe, with UK seeing third-hottest day on record," CNN, July 19, 2022, <https://edition.cnn.com/2022/07/18/weather/europe-uk-heatwave-wildfires-france-spain-intl/index.html>



Climate Crisis

Scientists say the persistent extreme heat already this year is in keeping with a trend. Heat waves in Europe, they say, are increasing in frequency and intensity at a faster rate than almost any other part of the planet. Global warming plays a role, as it does in heat waves around the world, but beyond that, there are other factors, some involving the circulation of the atmosphere and the ocean, that may make Europe a heat wave hot spot.⁵

According to Friederike Otto, a scientist at the Grantham Institute at Imperial College in London, Climate change is driving this heat wave, just as it is driving every heat wave now. Greenhouse gas emissions, from burning fossil fuels like coal, gas, and oil, are making heat waves hotter, longer lasting and more frequent. Heat waves that used to be rare are now common; heat waves that used to be impossible are now happening and killing people.⁶

When it comes to summer heat, climate change is a complete game changer and has already turned what would once have been called exceptional heat into very frequent summer conditions. A team of climate scientists published a study in the journal *Environmental Research: Climate*, where they scrutinised the role that climate change has played in individual weather events over the past two decades and their findings confirmed warnings of how global warming is changing the world from heat waves to extreme rainfall.⁷

⁵ Henry Fountain, "Why Europe Is Becoming a Heat Wave Hot Spot," *The New York Times*, July 18, 2022, <https://www.nytimes.com/2022/07/18/climate/europe-heat-wave-science.html>

⁶ Doyle Rice, "'Apocalypse': Hundreds dead as extreme heat wave broils Europe; UK could break record," *USA Today*, July 18, 2022, <https://www.usatoday.com/story/news/world/2022/07/18/extreme-heat-wave-europe-uk/10087274002/>

⁷ Gloria Dickie, "Climate change is driving 2022 extreme heat and flooding," *Aljazeera*, June 28, 2022, <https://www.reuters.com/world/climate-change-is-driving-2022-extreme-heat-flooding-2022-06-28/>

Furthermore, extreme heat can be dangerous to human health. Officials are worried about the effects on people's health and on healthcare systems already challenged by the COVID-19 pandemic as the searing heat sweeps the continent. Heatstroke and dehydration are the main risks to health and particularly affect young children and elderly people. Heatwaves can also have a significant impact on mental health as there are significant and positive associations between daily high temperatures and suicide.⁸

Conclusion

At the 12th Petersberg Climate Dialogue conference in Berlin on July 18, United Nations Secretary-General Antonio Guterres issued a dire warning that the global warming limit of 1.5 Celsius (2.7 Fahrenheit) agreed in the 2015 Paris climate accord was slipping further out of reach. He urged rich nations to keep the promises they have made about supplying funds to tackle the situation and said this must be the decade of decisive climate action. However, the prospects of initiating groundbreaking, broadly supported decisions seem bleaker than ever this year, while new heatwaves are affecting the world.⁹

Natural systems around the world are being affected by regional climate changes, particularly temperature increases, and that these temperature increases are very likely to be the result of anthropogenic emissions of greenhouse gases. Projected impacts of climate change can vary greatly due to the choice of future economic and social development pathway. Sustainable development can reduce vulnerability to climate change by enhancing adaptive capacity and increasing resilience. At present, however, few plans for promoting sustainability have explicitly included either adapting to climate change impacts or promoting adaptive capacity.

⁸ Catarina Demony and Kylie Maclellan, "Heatwave scorches Europe; health warnings issued," July 16, 2022, Reuters, <https://www.reuters.com/business/environment/health-warnings-issued-heatwave-scorches-europe-2022-07-15/>

⁹ News, "'Heat apocalypse': Europe in the grip of record-breaking heatwave," Aljazeera, July 18, 2022, <https://www.aljazeera.com/news/2022/7/18/record-heatwave-europe-uk-france-spain-wildfires>