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SITUATION REPORT

July 18, 2023

2023 European Heat Waves

HEALTH AND SAFETY RISKS FOR INTERNATIONAL TRAVELERS

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Overview

Travelers should avoid daytime activities across southern Europe in the coming weeks, as record-breaking temperatures increase the risk of heatstroke and exhaustion. Those in nations such as Spain, Italy, and Greece should be aware of the threat posed by wildfires and follow official directives as fires spread.

The continuing series of heat waves in Europe pose a significant risk to travelers, leading many nations to discourage travel and daytime activities in the near future. Travelers in southern Europe should be aware that the combination of wildfires and 110+ degree weather is likely to make outdoor activities unsafe. Those outside of southern Europe should follow local guidance as officials prepare for increasing energy costs, higher-than-average temperatures, and the risk of drought.

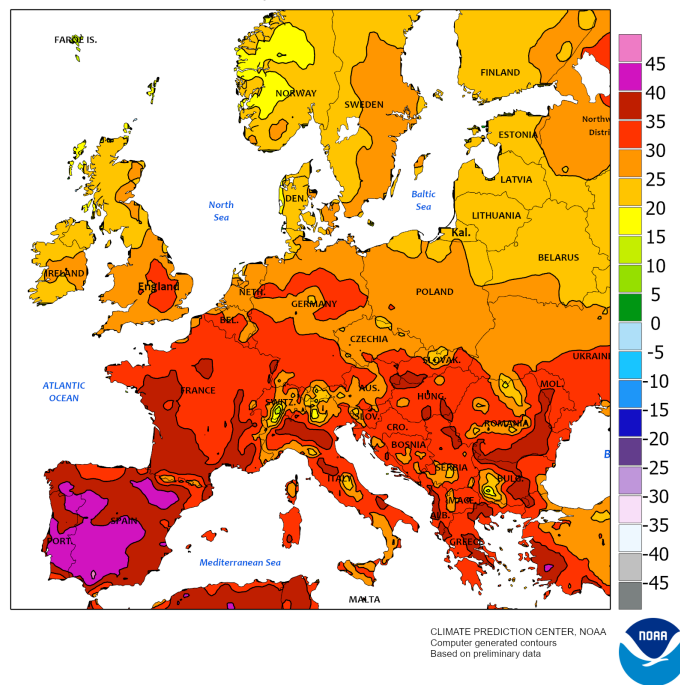
Key Takeaways

1. **The 2022 heat waves across Europe lead to high energy costs, wildfires, and thousands of deaths all over the country, highlighting similar risks for this summer.** The increased demand for air conditioning and electric fans led to extremely high energy bills, especially in northern Europe. Temperature-related wildfires forced the evacuation of thousands of individuals and caused significant damage to critical infrastructure. Over 60,000 people died due to heat-related conditions, including heat stroke and an increased risk of heart attacks.
2. **Travelers should avoid daytime outdoor activities as high temperatures increase the risk of heat stroke, heat exhaustion, and other health conditions.** To prevent heat-related conditions, travelers should stay hydrated, apply sunscreen, and seek shade whenever possible. Illnesses and injuries related to heat place a strain on local medical systems, and can be especially dangerous to the elderly and health-compromised.
3. **The heat waves Charon and Cerberus have directly contributed to a surge of wildfires across southern Europe, with containment efforts complicated by strong winds.** Drought conditions and high temperatures have led to wildfires across Europe, with Italy, Greece, and Spain being the most heavily impacted countries. Although there have been scattered reports of fires in France and Germany, they have managed to avoid the most severe blazes.

Europe's 2022 Heatwave

The 2022 European heat waves had widespread impacts across the continent, including fires in the south and soaring energy costs in the north, leading to the loss of thousands of lives.

Following last year's heat wave, which caused over 60,000 deaths and a sharp increase in energy prices throughout Europe, the region is now bracing itself for another wave of dangerously high temperatures.¹ In 2022, southern Europe experienced the highest monthly recorded temperatures on record, with countries like Italy, France, Portugal, and Spain breaking centuries-old temperature records, with temperatures reaching 117 degrees in July.² These extreme temperatures are associated with a heightened risk of heatstroke, exhaustion, and wildfires, particularly in southern regions such as Spain, Portugal, and Greece.³ Outside of southern Europe, the United Kingdom, Germany, and northern France also faced significant disruptions due to the persistent heat, with Germany tying its highest recorded annual temperature and all affected countries witnessing a substantial surge in energy costs as demand for air conditioning and fans skyrocketed. France and Germany, in particular, experienced historically high electricity prices during the heat wave, with the United Kingdom not far behind.⁴



Map of high temperatures in Europe from July 10-16, 2022

¹ <https://www.npr.org/2023/07/12/1187068731/heat-waves-europe-deaths-study>

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<https://www.haaretz.com/world-news/europe/2022-07-18/ty-article/a-117-degree-day-in-portugal-record-breaking-heat-waves-hit-europe/00000182-0751-db24-af96-ef538e420000>

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<https://www.cnn.com/2023/07/17/europe/europe-weather-second-heatwave-charon-climate-intl/index.htm>

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<https://www.bloomberg.com/news/articles/2022-08-08/german-power-rises-to-record-as-heat-wave-scorches-europe>

Heat Wave Charon - July 18, 2023

The ongoing Heat Wave Charon has primarily impacted southern Europe, with temperatures exceeding 95 degrees and causing an elevated risk of wildfires. Northern Europe is also expected to experience above-average temperatures in the coming weeks, although not reaching the extreme levels observed in the southern region.

The impact of the newest heat waves in 2023, starting with Heat Wave Cerberus in early July and followed by the recent Heat Wave Charon, is already being felt in many European countries.⁵ Drawing from the lessons of last year's unprecedented heat and wildfires, numerous cities have issued red alerts and cautioned travelers about the risks of heatstroke, exhaustion, and dehydration. Temperatures between 95 and 115 degrees are anticipated across the continent, with southern nations such as Spain, Italy, and Greece expected to bear the brunt of the heat.⁶ Travelers to northern states such as France and Germany are not expected to face the same level of heat as those in the south but can still anticipate temperatures peaking at 90 to 100 degrees during Heat Wave Charon.⁷ Wildfires have already been reported in Greece, and there is a high likelihood of their spread and intensification across much of southern Europe as temperatures rise and remain elevated in the coming weeks.⁸ Although Heat Wave Charon will lead to temperature increases in nearly all European nations, each country is expected to encounter distinct challenges during the summer season:

France | While Paris is expected to finish out Heat Wave Charon with average summer temperatures, southern France is experiencing temperatures similar to Spain and Italy.

France's southern coast is currently enduring record-breaking heat, with temperatures surpassing 105 degrees in Corsica and Marseille, and the high temperatures are expected to persist throughout the upcoming week;⁹ however, the northern part of the country, including Paris, is projected to miss the most extreme heat and maintain seasonal averages, at least in the near term. Nevertheless, experts have cautioned that if this situation changes, Parisians would face an elevated risk due to the city's inadequate preparation for a heat wave, making it one of the least prepared cities in Europe in that regard.¹⁰ Travelers to France should be aware of the elevated temperatures in the country's south, and of the increased risk of heat stroke and dehydration in Paris should future heat waves hit the city.

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https://www.independent.co.uk/news/long_reads/world/cerberus-heatwave-europe-italy-49c-b2375977.html

⁶ <https://ca.news.yahoo.com/europe-heatwave-2023-live-second-141300258.html>

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<https://apnews.com/article/europe-heat-wave-weather-cerberus-greece-spain-italy-ae5053ead1af0328ce3b5ad387cf9626>

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<https://www.reuters.com/world/europe/wildfire-rages-southeast-greek-capital-villagers-told-evacuate-2023-07-17/>

⁹ <https://www.thelocal.fr/20230717/will-france-escape-the-cerberus-heatwave>

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<https://www.france24.com/en/environment/20230717-parisians-are-most-at-risk-of-dying-in-european-heat-waves>

Germany | In preparation for Heat Wave Charon, German states have discouraged daytime activity, while the cost of energy spikes associated with efforts to stay cool are likely to increase prices for travelers.

German officials have issued health warnings to the elderly, warning that temperatures are expected to rise in the coming weeks, and pose an increased risk of heatstroke and exhaustion.¹¹ While Germany is not expected to experience the same level of heat as Spain or Greece, officials have advised against outdoor travel during the daytime, recommended businesses to close during peak temperatures, and even imposed restrictions on public gatherings like cookouts or grilling in southern Germany.¹² Last year's heat wave led to historically high energy costs in German cities, and Heat Waves Cerberus and Charon are likely to contribute to increased expenses for cooling homes and potential spikes in the cost of living in urban areas again.¹³ Travelers can anticipate encountering increases in accommodation prices, as well as higher costs for local goods and services.

Greece | Wildfires outside of Athens have forced evacuations and closures, with fears that further heat waves and high winds could threaten the capital itself.

The extreme heat in Greece has led to the closure of prominent landmarks, including the Acropolis, and government officials are urging travelers to stay indoors.¹⁴ Extreme temperature fires have sparked fires across Greece in recent months. Ongoing wildfires near Athens continue to burn as firefighters struggle to contain the blaze, resulting in evacuations and road closures aggravated by strong winds that facilitate its rapid spread.¹⁵ To mitigate the risk of the fire reaching Athens, EU members like France and Italy are providing aircraft and other resources for firefighting efforts.¹⁶ Complicating efforts to put out existing fires is the possibility of another spike in temperatures beginning Thursday, July 20 with forecasted temperatures up to 111 degrees.¹⁵ Should temperatures continue to climb, the risk of further fires increases significantly, complicating travel to popular destinations and between cities.

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<https://www.france24.com/en/europe/20230708-germany-austria-issue-warning-to-elderly-as-heatwave-rolls-across-europe>

¹²

<https://www.sueddeutsche.de/muenchen/fuerstenfeldbruck/fuerstenfeldbruck-grillen-badeseen-waldbrand-gefahr-klimawandel-trockenheit-1.5977273>

¹³

<https://www.cleanenergywire.org/news/germany-braces-heatwave-impacts-health-economy-and-water-supply>

¹⁴

<https://www.forbes.com/sites/tylerroush/2023/07/15/europes-dangerous-heat-wave-greece-closes-acropolis-as-warnings-issued-across-italy-spain-and-germany/?sh=28d033c339c0>

¹⁵ <https://www.washingtonpost.com/photography/interactive/2023/greece-wildfires-athens/>

¹⁶

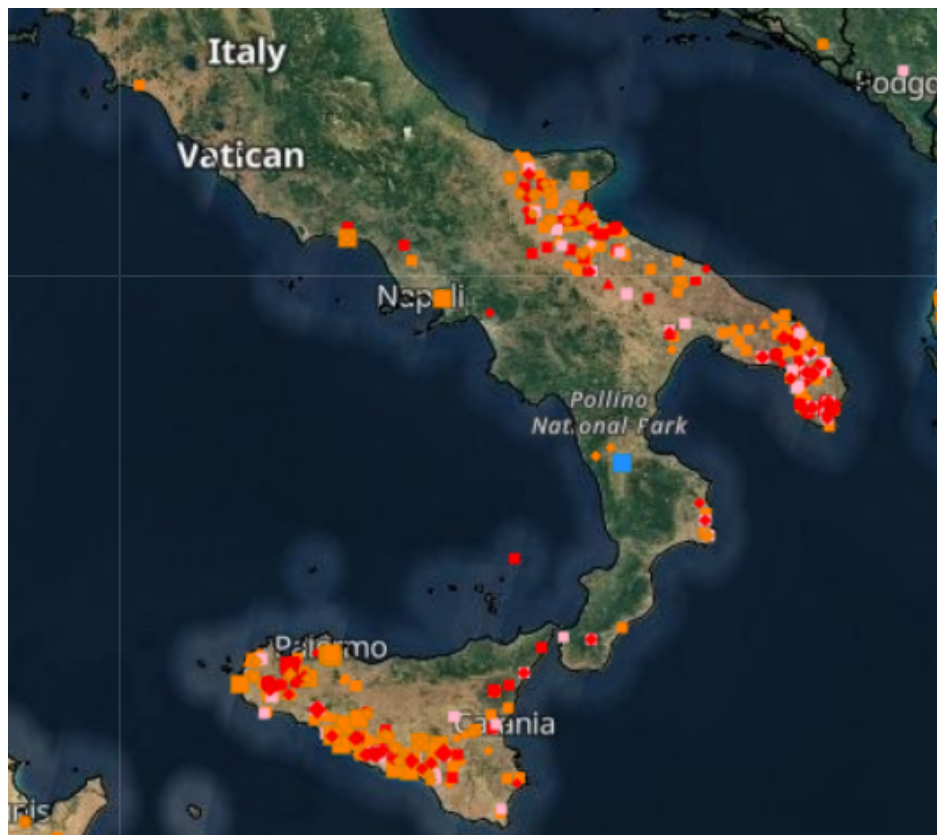
https://www.elpasoinc.com/france-and-italy-send-firefighting-planes-to-greece-as-several-wildfires-burn-around-the-capital/article_e97c5501-92ac-57bf-8457-3635516e14e8.html

¹⁵

<https://www.pbs.org/newshour/world/tourists-residents-advised-to-stay-inside-as-second-heat-wave-hits-europe>

Italy | Intense heat has prompted alerts from major Italian cities, and has increased the risk of wildfires spreading along its southern coast.

Italy, which is already grappling with heightened temperatures attributed to the earlier Heat Wave Cerberus, has 16 cities issuing red alerts in anticipation of further temperature increases caused by Heat Wave Charon.¹⁷ In addition, wildfires have sparked along the coast, especially in Lecce and Foggia, requiring hundreds of firefighters to contain the blaze.¹⁸ With a high heat advisory in effect, it is strongly advised that senior citizens, children, and individuals with preexisting health conditions remain indoors, particularly between the hours of 11:00 AM and 4:00 PM.¹⁹ As Heat Wave Charon continues, Italy is expected to be one of the worst-hit countries in Europe, with intense heat, elevated risk of wildfires, and an increase in heat-related illnesses highly likely.



Map of active wildfires and burnt areas in Italy on July 18.

¹⁷

https://www.independent.co.uk/news/long_reads/world/cerberus-heatwave-europe-italy-49c-b2375977.html

¹⁸ <https://www.breakinglatest.news/news/fires-in-the-lecce-area-over-500-requests-to-firefighters-news/>

¹⁹

<https://www.theintelligencer.com/news/world/article/heat-wave-bakes-southern-europe-sparking-18204026.php>

Spain | Extreme heat across Spain has made travel during the day unsafe and increases the risk of wildfires spreading across the countryside.

Spain is currently facing an unprecedented heatwave, with temperatures ranging from 90 to 110 degrees, particularly in Catalonia.²⁰ The country has issued red alerts for heat and droughts, leading embassies to advise their citizens against traveling, especially during daylight hours.²¹ Wildfires in the Canary Islands are likely to be joined by similar blazes in the mainland in the coming weeks, just as in the 2022 heat waves.²² Spain will experience high temperatures throughout the remainder of the summer, and will likely bear the brunt of further heat waves, increasing the risk posed to travelers in the coming weeks.

United Kingdom | Unique among most European states, the United Kingdom is not expected to see increases in temperature, and will avoid the worst of Heat Wave Charon.

As Europe braces for another wave of high temperatures, the United Kingdom will likely be spared from Heat Wave Charon and is experiencing comparatively lower daily temperatures and a wetter summer than its neighboring countries.²³ This trend of cooler temperatures and rainfall is anticipated to continue in the coming week, particularly across the northwest region of the country.²⁴ As the 2022 heat waves demonstrated, the United Kingdom is poorly prepared for any significant increase in temperatures, and if the situation changes, travelers will face a high risk of heat stroke and exhaustion.

²⁰

<https://news.sky.com/story/europe-heatwave-how-is-it-impacting-spain-italy-and-the-continent-s-other-most-popular-holiday-destinations-12922373>

²¹

<https://www.independent.co.uk/news/world/europe/european-travel-advice-heatwave-2023-update-b2377414.html>

²² <https://www.dw.com/en/spain-saw-hottest-spring-on-record-in-2023/a-65851473>

²³ <https://www.bbc.com/weather/features/66234637>

²⁴

<https://www.google.com/url?q=https://twitter.com/metoffice/status/1681389713498701841&sa=D&source=docs&ust=1689714866223898&usg=AOvVaw0ZX601RXg8FHYZbY714oG3>

Implications for International Education

Travelers should avoid or limit daytime activities in the coming weeks to avoid the risk of heatstroke. While southern Europe faces the increased risk of wildfires alongside record-breaking heat, northern Europe will experience slightly lower temperatures and increased costs of goods and services.

With proper training, preparedness, and practical safety precautions, travelers can navigate these risks confidently.

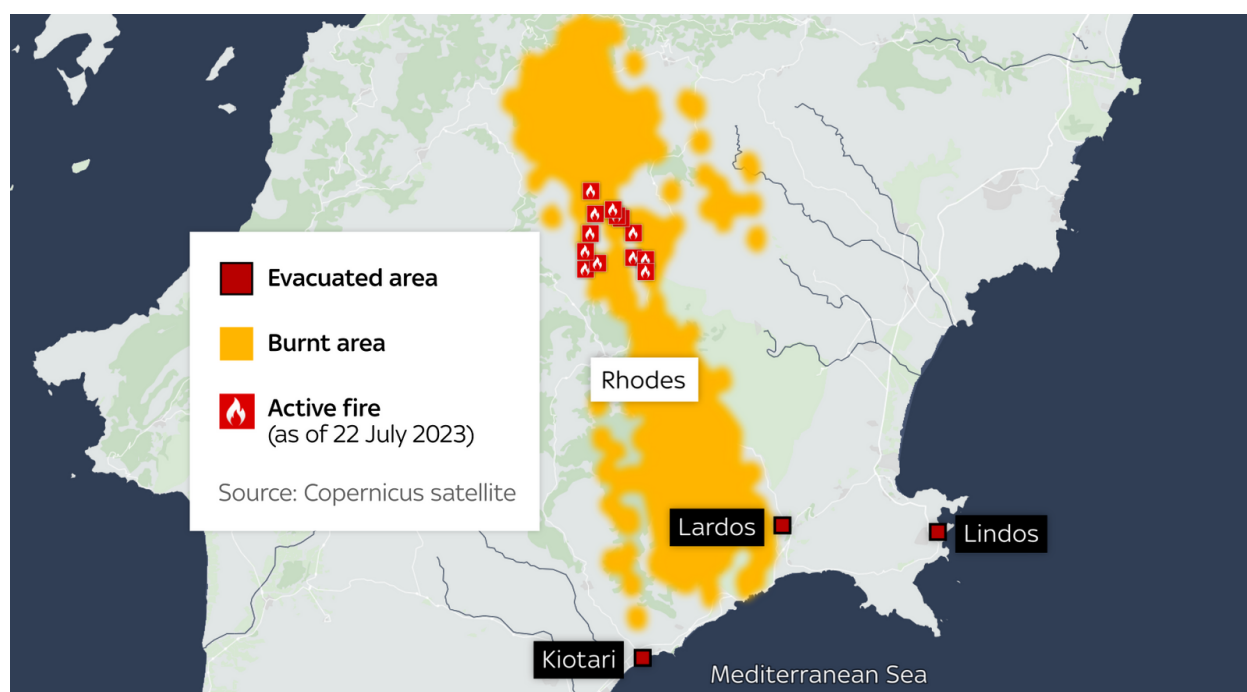
The following recommendations may help mitigate the risks outlined in this report:

- Travelers should stay indoors and avoid strenuous activities during the height of temperatures. Prioritize rest and limit physical exertion between 11:00 AM and 4:00 PM whenever feasible.
- Travelers should stay hydrated and travel with bottled water at all times.
- Travelers should be aware of nearby hospitals and healthcare options, especially if outdoor activity is required.
- Travelers should be aware of the symptoms of heat stroke and other heat-related illnesses, and monitor their heart rate, body temperature, and exhaustion while outdoors. Those experiencing these symptoms should immediately hydrate and seek medical assistance.
- Travelers should stay up to date with local officials and news on the path of local wildfires, and familiarize themselves with evacuation routes.
- Travelers should keep windows closed and use blinds or curtains as much as possible to keep interior spaces cool.
- Travelers can limit the risk of heatstroke by taking cold showers and using cold compresses or wet towels to lower body temperature.
- Travelers should wear hats and protective clothing, and apply sunscreen regularly throughout the day to avoid burns.
- Travelers should avoid caffeine and alcohol during heat waves, as both dehydrate and can increase the risk of heat-related illnesses.

Update July 23, 2023

Greek Wildfires | Wildfires in Rhodes, Greece have increased in severity since July 22, forcing tens of thousands on the island to evacuate with assistance from Greek emergency services.

Uncontrolled bushfires in Rhodes, Greece that began on July 18 have intensified in the past 24 hours, forcing the largest evacuation in Greek history, affecting nearly 30,000 people.²⁵ The evacuation orders have primarily been focused on major tourist towns and destinations, forcing 12 hotels to close and thousands of international visitors to flee on short notice. Those within the evacuation zone, which extends from the center of the island to Kiotari and Lardos, have been ordered to leave the island by boat or by plane, warning nearby communities on the island that additional evacuation orders could follow.²⁶ Those trapped as a result of closed roads or in the path of the wildfires have been rescued by the Greek Navy, Army, and local Rhodes police.²⁷ So far no deaths or major injuries have been reported, but Greek officials have asked those in the evacuation order to follow guidance from emergency forces and to prepare for evacuation.



As Greece endures its longest heatwave on record, temperatures exceeding 104 degrees are sparking widespread fires across the country, making this July the hottest in 50 years.²⁸ Meteorologists predict that at least another week of record-breaking temperatures are expected.²⁹ Although fires around Athens had been mostly contained, they experienced a brief resurgence on July 20, leading to decreased air quality and the closure of major roads near the capital.³⁰

²⁵ <https://www.cnn.com/2023/07/22/europe/greece-record-breaking-heat-wave-climate-intl/index.html>

²⁶

<https://www.usatoday.com/story/news/world/2023/07/23/rhodes-greece-wildfires-evacuation/70453581007/>

²⁷ <https://www.aljazeera.com/news/2023/7/22/greece-faces-its-hottest-july-weekend-in-50-years>

²⁸ <https://www.aljazeera.com/news/2023/7/22/greece-faces-its-hottest-july-weekend-in-50-years>

²⁹ <https://www.dw.com/en/greece-faces-longest-heat-wave-on-record/>

³⁰ <https://www.aljazeera.com/news/2023/7/22/greece-faces-its-hottest-july-weekend-in-50-years>

Europe Heatwave | Outside of Greece, high temperatures continue to be felt in Southern Europe, which will bring heat exhaustion, risk of wildfires, and unpredictable weather patterns in the coming weeks.

Extreme heat across Southern Europe is expected to persist through the coming week, leading to wildfires in Italy and Spain and escalating the risk of dangerous weather, such as hail and thunderstorms, in affected areas.³¹ Currently the heart of the heat wave remains in Italy, Spain, Greece, and the Balkans, with Rome, Marseilles, and Madrid all breaking records set during the 2022 European Heat Wave.³² While fires outside of Greece have remained small and so far have been contained by emergency services, the risk of temperatures over 100 degrees lingering for at least another week increases the risk of wildfires near major cities and travel destinations. The connection between unusually high temperatures and dangerous weather has resulted in unpredictable storms, such as major hail storms in Treviso, Italy, and flash flooding in the Balkans which left several dead.^{33,34} While the Mediterranean has seen extreme heat and unusual weather patterns, northern France and the United Kingdom have continued to avoid the worst of the heat wave, and are currently experiencing seasonal average temperatures.³⁵ Should this change, both regions are poorly equipped to deal with a jump in temperature, and will likely experience major increases in heat stroke and exhaustion, as well as travel disruptions as locals attempt to flee the heat.

³¹

<https://www.theguardian.com/world/2023/jul/21/weather-tracker-records-fall-europe-heatwave-wildfires-hailstones-philippines-typhoon>

³² <https://www.independent.co.uk/weather/when-will-heatwave-end-in-europe-b2379371.html>

³³

<https://www.theguardian.com/world/2023/jul/21/weather-tracker-records-fall-europe-heatwave-wildfires-hailstones-philippines-typhoon>

³⁴ <https://www.nytimes.com/article/europe-heat-wave-forecast.html>

³⁵

<https://www.independent.co.uk/climate-change/news/met-office-scotland-suffolk-england-lincolnshire-b2377297.html>

Update August 7, 2023

European Wildfires | As of August 7, ongoing heat waves across the Mediterranean have been linked to spreading wildfires in Italy, France, Portugal, and Spain, forcing hundreds of evacuations.

Europe's ongoing heat waves are continuing to increase the risk of uncontrollable wildfires, as have been seen in Greece and Southern Italy. Recently, these high temperatures have sparked new blazes in Sardinia, southern France, and the Portuguese-Spanish border. As of August 7, localized brush fires on the Italian island of Sardinia have forced 600 evacuations, all in the vicinity of the town of Posada.³⁶ The evacuations, largely issued as a precautionary measure as emergency services attempt to contain the blaze, follow a regional trend of intense-heat related wildfires. Along the Spanish-French border, authorities have evacuated over 150 people from the border town of Portbou, in Catalonia, as record-breaking temperatures along France's southern coast have intensified in the previous days.³⁷ Spain and Portugal are likely to see ongoing fires in the upcoming weeks, as both countries are entering their third heat wave of the summer, with temperatures between 100 and 111 degrees likely during the day.³⁸ This new heat wave has been connected to ongoing fires on the Spanish-Portuguese border, burning over 7,000 hectares of land in the province of Castelo Branco and requiring over 1,000 firefighters to help slow the spread.³⁹ While firefighting and rescue efforts are ongoing, so far eleven people have been injured, and government officials have warned that as much as 20,000 hectares may be burned before the fire will be contained.⁴⁰

Continuing Heat | While southern Europe is expected to enter an additional heat wave, and will see increased risk of wildfires and heat stroke, northern Europe will continue to avoid the worst of increasing temperatures.

Wildfires are expected to start and spread in increasing frequency over the next few weeks, and countries such as Spain, Portugal, Italy, and Greece will continue to face 100+ degree days throughout the month. High temperatures have depressed Mediterranean tourist numbers, and have contributed to higher than average daily death rates, especially in urban areas with limited access to air conditioning.⁴¹ Despite southern Europe entering the second month of record-breaking temperatures, northern France, the United Kingdom, and Germany have largely avoided Heat wave Charon and Cerberus. The United Kingdom is predicted to experience seasonal average temperatures and increased rainfall, while Paris is expected to avoid the heat

³⁶

<https://www.telesurenglish.net/news/Hundreds-of-People-Evacuated-in-Italys-Sardinia-Due-to-Blazes-2023-0807-0006.html>

³⁷

<https://www.rfi.fr/en/science-environment/20230805-dozens-evacuated-as-wildfire-spreads-on-spain-france-border>

³⁸

<https://www.thenationalnews.com/world/europe/2023/08/07/spain-braces-for-third-heatwave-as-fires-rage-across-europe/>

³⁹

<https://www.thenationalnews.com/world/europe/2023/08/07/spain-braces-for-third-heatwave-as-fires-rage-across-europe/>

⁴⁰ <https://www.voanews.com/a/portugal-battles-wildfires-amid-searing-heat/7214270.html>

⁴¹ <https://www.nytimes.com/2023/07/29/world/europe/italy-greece-wildfires-heat.html>

that the Mediterranean coast cities of Marseilles and Lyon are in the midst of.⁴² Germany has begun to see temperature increases since August 4, especially in the south of the country, but is still largely in line with seasonal averages.⁴³ Weather experts have warned that Germany remains at a high risk of future temperature swings, and that any increase in daily averages could come quickly and with little warning.⁴⁴

⁴²

<https://metro.co.uk/2023/07/17/uk-weather-will-the-uk-get-europes-45c-heatwave-latest-forecast-19139938/>

⁴³ <https://www.thelocal.de/20230803/summer-set-to-return-to-germany-with-mid-august-heatwave>

⁴⁴ <https://effis.jrc.ec.europa.eu/apps/fire.risk.viewer/>

