# Major cities face 25% surge in dangerously hot days since the 1990s, raising urgent climate risks



The world’s major capital cities are enduring a sharp rise in extremely hot days, with recent analysis indicating a 25% increase since the 1990s. This surge translates to thousands more days above dangerous temperature thresholds each year, placing millions of urban residents at heightened risk from the intensifying climate crisis. The study by the International Institute for Environment and Development (IIED) reveals that across 43 of the globe’s most populous capitals, the total number of days exceeding 35°C jumped from an average of 1,062 annually between 1994 and 2003 to 1,335 days from 2015 to 2024.

Cities as diverse as Washington DC, Madrid, Tokyo, Beijing, and London are experiencing this rise, with some regions seeing particularly dramatic changes. For instance, Rome and Beijing have doubled their days above 35°C, while Manila’s count has tripled. Madrid now faces 47 extremely hot days yearly compared to 25 in earlier decades, and London, despite its temperate climate, has seen the number of days over 30°C double. The analysis highlights not only the global scale of warming but the direct human toll it exacts, especially among elderly and impoverished populations in rapidly expanding urban areas, where exposure to the urban heat island effect is exacerbated by inadequate housing.

The escalating frequency and intensity of heatwaves are linked to continued fossil fuel emissions, which, despite international climate targets, have not yet begun the urgent decline necessary to limit warming to 1.5°C above preindustrial levels. Record temperatures recorded in 2024 across continents—from North America to Asia and Africa—underscore this trend. Japan, for example, endured its all-time highest temperature of 41.2°C in July, which led to over 10,000 hospitalisations. Europe recorded at least 16,500 heat-related deaths during the summer months, demonstrating the lethal consequences of unchecked climate change. Beyond the heat itself, many cities are grappling with "climate whiplash," extreme shifts between heavy rainfall and severe drought, which compound the vulnerabilities of urban infrastructures and populations.

International efforts to address this crisis are gaining momentum. The Global Center on Adaptation (GCA) launched “The Heat is On” campaign to promote life-saving interventions such as cooling centres, shaded rest areas, early-warning systems, and climate-smart work schedules. Macky Sall, GCA chair and former president of Senegal, emphasised that extreme heat is an immediate threat with broad economic and social ramifications, advocating for investment in proven adaptive solutions to safeguard communities. However, critics of some national responses, including the UK government, have labelled their preparations as insufficient and fragmented, pointing to the need for more comprehensive and coordinated action.

Experts warn that reliance on air conditioning alone will not solve the mounting challenges. Anna Walnycki of IIED stressed the urgency for funding to improve building insulation, ventilation, and urban shade, along with developing effective heat action plans. This is especially pressing given that roughly a third of the world's urban population lives in slums or informal settlements, where poor-quality housing leaves residents disproportionately vulnerable to heat stress.

Supplementing these findings, other research corroborates the alarming increase in extreme heat events. For instance, a related IIED study identified a 52% rise in days above 35°C in 20 of the largest global capitals over the past three decades. Cities such as Jakarta and Buenos Aires have witnessed especially sharp increases in such hot days, presenting severe public health challenges. Further analyses suggest that by 2050, under a 3°C warming scenario, cities like New York, London, Los Angeles, Seoul, and Shanghai will experience at least 20% more extreme heat days annually compared to 2022, raising serious concerns for urban planning and infrastructure resilience.

In the United States, data show that 80% of 247 cities have faced more frequent stretches of extreme heat—defined as three or more consecutive days exceeding the 90th percentile temperature since 1970. Cities like Nashville and Raleigh now experience several additional heat streaks each year, exacerbating health risks for their populations. This trend resonates globally: climate studies indicate that most locations worldwide have seen increases in extremely hot days annually, with many now enduring over two weeks more of dangerously high temperatures than in the 1970s.

Collectively, these findings paint a stark picture of a warming world where urban residents, especially the most vulnerable, face growing hazards unless urgent adaptation and mitigation measures are implemented. The escalating toll of heat underscores that climate change cannot remain a distant policy concern but must be addressed as an immediate public health and social justice imperative.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.theguardian.com/environment/2025/sep/30/worlds-major-cities-hit-by-25-leap-in-extremely-hot-days-since-the-1990s), [[2]](https://www.iied.org/52-jump-days-over-35degc-worlds-biggest-capital-cities), [[3]](https://www.reuters.com/world/number-days-over-35-c-surges-worlds-scorching-capitals-2024-06-28/)
* Paragraph 2 – [[1]](https://www.theguardian.com/environment/2025/sep/30/worlds-major-cities-hit-by-25-leap-in-extremely-hot-days-since-the-1990s), [[2]](https://www.iied.org/52-jump-days-over-35degc-worlds-biggest-capital-cities), [[3]](https://www.reuters.com/world/number-days-over-35-c-surges-worlds-scorching-capitals-2024-06-28/)
* Paragraph 3 – [[1]](https://www.theguardian.com/environment/2025/sep/30/worlds-major-cities-hit-by-25-leap-in-extremely-hot-days-since-the-1990s), [[3]](https://www.reuters.com/world/number-days-over-35-c-surges-worlds-scorching-capitals-2024-06-28/)
* Paragraph 4 – [[1]](https://www.theguardian.com/environment/2025/sep/30/worlds-major-cities-hit-by-25-leap-in-extremely-hot-days-since-the-1990s)
* Paragraph 5 – [[1]](https://www.theguardian.com/environment/2025/sep/30/worlds-major-cities-hit-by-25-leap-in-extremely-hot-days-since-the-1990s), [[6]](https://www.axios.com/2025/07/30/heat-streaks-climate-change-cities)
* Paragraph 6 – [[1]](https://www.theguardian.com/environment/2025/sep/30/worlds-major-cities-hit-by-25-leap-in-extremely-hot-days-since-the-1990s)
* Paragraph 7 – [[2]](https://www.iied.org/52-jump-days-over-35degc-worlds-biggest-capital-cities), [[3]](https://www.reuters.com/world/number-days-over-35-c-surges-worlds-scorching-capitals-2024-06-28/)
* Paragraph 8 – [[4]](https://www.msci.com/research-and-insights/blog-post/mapping-extreme-heat-costs-for-the-world-largest-cities)
* Paragraph 9 – [[6]](https://www.axios.com/2025/07/30/heat-streaks-climate-change-cities), [[7]](https://www.climatecentral.org/climate-matters/more-extremely-hot-days-2023)

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## Bibliography

1. <https://www.theguardian.com/environment/2025/sep/30/worlds-major-cities-hit-by-25-leap-in-extremely-hot-days-since-the-1990s> - Please view link - unable to able to access data
2. <https://www.iied.org/52-jump-days-over-35degc-worlds-biggest-capital-cities> - An analysis by the International Institute for Environment and Development (IIED) reveals a 52% increase in the number of days exceeding 35°C in the world's largest capital cities over the past three decades. The study examined 20 major capitals, including Dhaka, London, Cairo, Manila, Kinshasa, Tokyo, and Paris, highlighting a significant rise in extreme heat days, posing health risks to millions of urban residents. The findings underscore the urgent need for policymakers to implement adaptive measures to address the escalating climate crisis.
3. <https://www.reuters.com/world/number-days-over-35-c-surges-worlds-scorching-capitals-2024-06-28/> - A Reuters report highlights a 52% surge in the number of days reaching 35°C in 20 of the world's largest capitals over the past three decades. The analysis, conducted by the International Institute for Environment and Development (IIED), found that cities like Jakarta, Seoul, and Buenos Aires experienced significant increases in extreme heat days, with Jakarta's count rising from 28 to 167 days over the period. The report emphasizes the escalating health risks posed by prolonged heatwaves in urban areas.
4. <https://www.msci.com/research-and-insights/blog-post/mapping-extreme-heat-costs-for-the-world-largest-cities> - MSCI's research projects that by 2050, major cities will experience an average of 12 more extreme heat days annually compared to 2022, under a 3°C warming scenario. Cities like New York, London, Los Angeles, Seoul, and Shanghai are expected to see at least a 20% increase in extreme heat days. The study underscores the growing challenges urban areas face due to climate change, highlighting the need for strategic planning to mitigate the impacts of rising temperatures on infrastructure and public health.
5. <https://www.valuepenguin.com/heat-waves-study> - A ValuePenguin study reveals that New Orleans has experienced the most significant increase in annual heatwave days, rising by an additional 40.8 days since 1961. Other cities, including Tampa and San Francisco, also saw substantial increases. The study highlights the escalating risks of heatwaves, particularly for vulnerable populations, and underscores the importance of adaptive measures to address the health and infrastructure challenges posed by prolonged extreme heat events.
6. <https://www.axios.com/2025/07/30/heat-streaks-climate-change-cities> - An Axios report based on Climate Central's analysis indicates that 80% of 247 U.S. cities have experienced more frequent extreme heat streaks since 1970. Defined as three or more consecutive days with temperatures exceeding the 90th percentile, these heat streaks have become increasingly common, with cities like Nashville and Raleigh reporting five additional heat streaks per year on average. The trend underscores the growing health risks associated with prolonged periods of extreme heat due to climate change.
7. <https://www.climatecentral.org/climate-matters/more-extremely-hot-days-2023> - Climate Central's analysis of 241 locations reveals that 81% have seen an increase in the annual number of extremely hot days since 1970. The average change across these locations is an additional 11 extremely hot days per year. Notably, nearly one-third now experience at least 14 more extremely hot days annually compared to 1970. The study highlights the widespread impact of rising temperatures and the need for adaptive strategies to mitigate the effects of extreme heat on communities.