

**Embargoed until: Wednesday 28 November, 11:30pm (GMT)**

## **Extreme heat damaging our health and livelihoods and threatening to overwhelm hospitals around the world**

*Research from 27 global institutions published in The Lancet says our vulnerability to heat is unacceptably high and rising in all regions of the world.*

*Outdoor workers, people with underlying health conditions and the urban elderly especially at risk.*

New research published in The Lancet medical journal shows that rising temperatures as a result of climate change are already exposing us to an unacceptably high health risk and warns, for the first time, that older people in Europe and the East Mediterranean are particularly vulnerable to extremes of heat, markedly higher than in Africa and SE Asia.

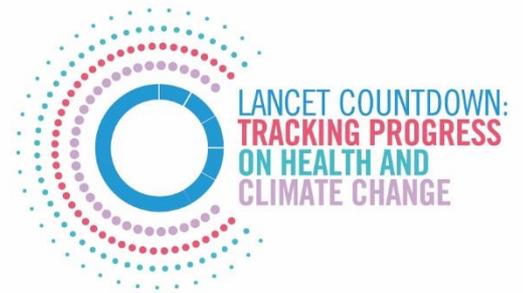
Leading doctors, academics and policy professionals from 27 organisations have contributed analysis and jointly authored the report. As members of [The Lancet Countdown: Tracking Progress on Health and Climate Change](#), partners behind the research include the World Bank, World Health Organization (WHO), University College London and Tsinghua University, among others.

Some of the new health impacts of heat documented in *The 2018 Report of The Lancet Countdown on health and climate change* include:

- 157 million more vulnerable people were subjected to a heatwave<sup>1</sup> last year than in 2000, and 18 million more than in 2016.
- 153 billion hours of work were lost in 2017 due to extreme heat as a result of climate change. China alone lost 21 billion hours, the equivalent of a year's work for 1.4% of their working population. India lost 75 billion hours, equivalent to 7% of their total working population. New methodologies have captured this data for the first time.
- Rising ambient temperatures are placing vulnerable populations at increased risks across all regions of the world. Europe and the East Mediterranean are particularly at risk, most likely due to ageing populations living in cities, with 42% and 43% of over 65s vulnerable to heat exposure. Markedly higher than Africa (38%) and southeast Asia (34%).
- Heat greatly exacerbates urban air pollution, with 97% of cities in low- and middle- income countries not meeting WHO air quality guidelines.
- Heat stress, an early and severe effect of climate change, is commonplace and we, and the health systems we rely on, are ill equipped to cope.
- Rising temperatures and unseasonable warmth is responsible for cholera and dengue fever spreading, with vectorial capacity for their transmission increasing across many endemic areas.
- The mean global temperature change to which humans are exposed is more than double the global average change, with temperatures rising 0.8°C versus 0.3°C.

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<sup>1</sup> assuming each person experienced a heatwave once



Prof. Hugh Montgomery, Co-Chair of The Lancet Countdown on Health and Climate Change and Director of the Institute for Human Health and Performance, University College London: *"Exposure and vulnerability to extreme heat is unacceptably high and rising for people all around the world. Heat stress is hitting hard – particularly amongst the urban elderly, and those with underlying health conditions such as cardiovascular disease, diabetes or chronic kidney disease. In high temperatures, outdoor work, especially in agriculture, is hazardous. Areas from Northern England and California, to Australia are seeing savage fires with direct deaths, displacement and loss of housing as well as respiratory impacts from smoke inhalation."*

The report, which looks at 41 separate indicators across a range of themes, says urgent steps are needed to protect people now from the impacts of climate change. In particular, stronger labour regulations are needed to protect workers from extremes of heat and hospitals and the health systems we rely on need to be better equipped for extreme heat so they are able to cope. But the report also stresses that there are limits to adapting to the temperature increases, and if left unabated, climate change and heat will overwhelm even the strongest of system, so the need for reducing greenhouse gas emissions is critical.

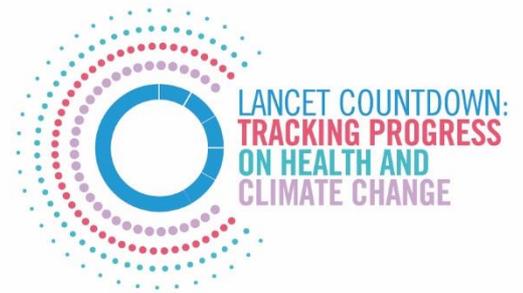
Prof. Kris Ebi, Professor of global health and of environmental and occupational health science, University of Washington: *"Increased mortality in extreme heatwaves is not something that may happen, it's happening now and will continue as global temperatures continue to rise. There is abundant evidence that communities are not prepared for the ongoing increases in the frequency, intensity, and duration of heatwaves. Actions are needed right now, matched with investments, such as implementing early warning systems for heatwaves, including mapping vulnerable populations and providing interventions designed to increase resilience during hot weather."*

2018 has been an even hotter year in many parts of the world and the [World Weather Attribution Study for N Europe](#) showed this summer's heat wave was twice as likely to have happened as a result of man made climate change.

With 51% of the 478 global cities surveyed in the report expecting climate change to seriously compromise their public health infrastructure, the need to ensure health systems, hospitals, and clinics can cope when extreme heat strikes is clear. 65% said they have either already completed or are currently doing climate change risk assessments but spending on climate adaptation for health is estimated to be just 4.8% (£11.68 billion) of all adaptation spending which is woefully inadequate, the report warns.

Prof. Anthony Costello, Co-Chair of Lancet Countdown, paediatrician, scientist and former Director at WHO: *"The world has yet to effectively cut its emissions. The speed of climate change threatens our, and our children's lives. Following current trends we exhaust our carbon budget required to keep warming below two degrees, by 2032. The health impacts of climate change above this level threaten to overwhelm our emergency and health services."*

Other findings of the report include: for the first time, deaths from air pollution by source attribution, with coal accounting for approximately 16% globally; a new indicator mapping extremes of precipitation that identifies South America and southeast Asia among the regions most exposed to flood and drought and, on food security, the report points to 30 countries experiencing downward trends in crop yields, reversing a decade-long trend that had previously seen global improvement. Yield potential is estimated to be declining in every region as extremes of weather become more frequent and more extreme.



Dr Tedros Adhanom Ghebreyesus, Director-General, World Health Organization said in support of the report: *“The Lancet Countdown on Health and Climate Change is an essential partner in driving global progress towards achieving the goals of the Paris Agreement, the most important health treaty of the century. The findings of the 2018 Lancet report are clear. The stakes could not be higher. We cannot delay action on climate change. We cannot sleepwalk through this health emergency any longer.”*

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## Notes to editors

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URL for the report to link to in published copy (which goes live at 23.30 GMT 28 November)

[www.lancetcountdown.org/the-report](http://www.lancetcountdown.org/the-report)

For additional embargoed media materials see: <https://bit.ly/2Adl8tL>

The Lancet Countdown: Tracking Progress on Health and Climate Change is a global, independent, interdisciplinary research collaboration between 27 leading academic institutions, the United Nations, and intergovernmental agencies. It draws on world-class expertise from climate scientists; ecologists; mathematicians; geographers; engineers; energy, food, livestock and transport experts; economists; social and political scientists; public health professionals; and medical doctors. The Countdown monitors and reports annually on the relationship between health and climate, and its implications for national governments.

The Countdown was launched following the 2015 Lancet Commission on Health and Climate Change, which concluded that unmitigated climate change would undermine 50 years of public health gains. In contrast, responding to climate change could represent “the greatest global health opportunity of the 21st century.”

*The 2018 Report of The Lancet Countdown on health and climate change: shaping the health of nations for centuries to come* presents data for 2017 on 41 indicators across five domains: climate change impacts, exposures, and vulnerability; adaptation planning and resilience for health; mitigation actions and health co-benefits; economics and finance; and public and political engagement. New indicators were developed and existing ones improved upon from the prior year.

This study was funded by the Wellcome Trust. It was conducted by researchers from Centre Virchow-Villermé (France and Germany), European Centre for Environment and Human Health (UK), Imperial College London (UK), International Livestock Research Institute (Kenya), International Institute for Applied Systems Analysis (International), INDEPTH Network (pan-African), London School of Hygiene & Tropical Medicine (UK), NHS Sustainable Development Unit (UK), Iranian Fisheries Research Organization (Iran), Tehran University of Medical Sciences (Iran), The Centre for Climate & Security (US), The Grantham Institute (UK), Tsinghua University (China), Universidad Peruana Cayetano Heredia (Peru), Umea University (Sweden), United Nations University (International), University of Birmingham (UK), University of Colorado Boulder (US), University of Geneva (Switzerland), University College London (UK), University of Exeter (UK), University of Sydney (Australia), University of Washington (US), University of York (UK), World Health Organization (International), World Meteorological Organisation (International), World Bank Group (International).

For more information on the Lancet Countdown see: [www.lancetcountdown.org](http://www.lancetcountdown.org).