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## **The Lancet: climate change already damaging health of millions globally**

*Research from 26 global institutions published in The Lancet points to looming public health emergency*

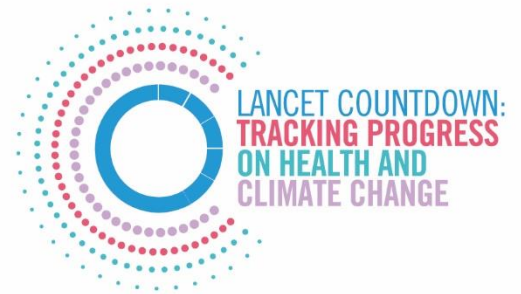
**London** – New research shows that climate change is already a significant public health issue and a looming global health emergency. Its findings, outlined in [The Lancet medical journal](#), demonstrate the various ways climate change is already affecting the health of people across the planet, today.

Leading doctors, academics and policy professionals from 26 partner 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.

Just a few of the existing health impacts documented include:

- An average 5.3% fall in productivity for rural labour estimated globally since 2000, as a result of rising temperatures. In 2016 this effectively took more than 920,000 people globally out of the workforce, with 418,000 of them in India alone<sup>1</sup>.
- Between 2000 and 2016, the number of people exposed to heatwave events has increased by approximately 125 million, with a record 175 million people exposed to heatwaves in 2015. This supports the Lancet's existing research showing just under 1 billion additional heatwaves exposure events happening by 2050<sup>2</sup>.
- Undernutrition is identified as the largest health impact of climate change in the 21st century. Related impacts of climate change on crop production referenced in the report include a 6% decline in global wheat yields and 10% fall in rice yields for each additional 1 °C rise in global temperature.
- Over 803,000 premature and avoidable deaths in 2015 as a result of air pollution across 21 Asian countries, attributable to just one type of air pollution from coal power, transport and use of fossil fuels in the home.
- A striking increase of 3% and 5.9% in the vectorial capacity for the transmission of Dengue due to climate trends, by just two types of mosquito since 1990. With 50 to 100 million infections of Dengue estimated to occur each year, this will exacerbate the spread of the world's most rapidly expanding disease<sup>3</sup>.

The authors are clear the necessary response to climate change still provides an opportunity to realise substantial gains in public health. The potential benefits and opportunities are staggering, including cleaning-up the air of polluted cities, delivering more nutritious diets, ensuring energy, food and water security, and alleviating poverty, alongside social and economic inequalities.



**Prof. Anthony Costello, Co-Chair of the Lancet Countdown and a Director at the World Health**

**Organization explains:** *“Climate change is happening and it’s a health issue today for millions worldwide. The outlook is challenging, but we still have an opportunity to turn a looming medical emergency into the most significant advance for public health this century.*

*“As we move in the right direction, we hope for a step-change from governments to tackle the cause and impacts of climate change. We need urgent action to cut greenhouse gas emissions. The health and economic benefits on offer are huge. The cost of inaction will be counted in preventable loss of life, on a large scale.”*

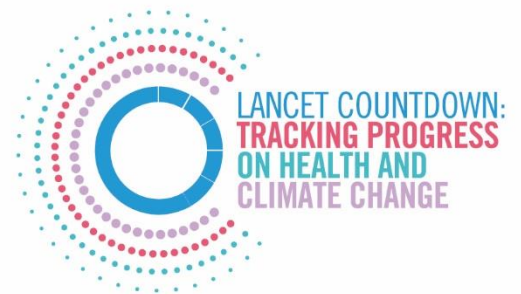
The initiative builds on the work of the 2015 Lancet Commission on Health and Climate Change, which concluded that anthropogenic climate change threatens to undermine the last 50 years of gains in public health<sup>4</sup>. Today’s research shows this is becoming increasingly clear and the challenges are greater than anticipated. The findings also show that climate change is affecting the health of all populations, today<sup>5</sup>. These impacts are disproportionately felt by communities least responsible for climate change and those who are the most vulnerable in society.

The report *‘From 25 years of inaction to a global transformation for public health’*, identifies health challenges we are only just beginning to see emerge with the findings demonstrating there is no room for complacency. Unavoidable increases in global temperature and the role of climate change as a threat multiplier and an accelerant of instability, means many trends identified are expected to significantly worsen.

**Prof. Hugh Montgomery, Co-Chair of the Lancet Countdown and Director of the Institute for Human Health and Performance, University College London, adds:** *“We are only just beginning to feel the impacts of climate change. Any small amount of resilience we may take for granted today will be stretched to breaking point sooner than we may imagine.*

*“We cannot simply adapt our way out of this, but need to treat both the cause and the symptoms of climate change. There are many ways to do both that make better use of overstretched healthcare budgets and improve lives in the process.”*

Despite the scale of the challenge, the report points to clear reasons for optimism. Momentum in cutting emissions responsible for climate change is building across a number of sectors, with significant benefit for public health to follow. This transition is most apparent in trends across the energy and transport sectors. Notable examples include peak global coal use, with numerous national commitments to phase-out coal power – across Canada, Finland, France, Netherlands, and the UK – the rapid rise of renewable energy, and emerging transformation of transport driven by electric vehicles. These interventions go hand-in-hand with improved air quality and substantial benefits for human health.



**Christiana Figueres, Chair of the Lancet Countdown’s High-Level Advisory Board and former Executive Secretary of the UN Framework Convention on Climate Change, explains:** *“The Lancet Countdown’s report lays bare the impact that climate change is having on our health today. It also shows that tackling climate change directly, unequivocally and immediately improves global health. It’s as simple as that.*

*“Most countries did not embrace these opportunities when they developed their climate plans for the Paris Agreement. We must do better. When a doctor tells us we need to take better care of our health we pay attention and it’s important that governments do the same.”*

Other findings of the report show that over one billion people globally will be faced with a need to migrate within ninety years, due to a rise in sea level caused by ice shelf collapse, unless necessary action is taken. Some 87% of a random sample of global cities are in breach of WHO air pollution guidelines, meaning billions of people worldwide are exposed to unsafe levels of fine particulate matter (PM<sub>2.5</sub>). This is significantly higher than previously thought<sup>5</sup>. Global exposure to PM<sub>2.5</sub> air pollution has also increased by 11.2% since 1990.

In turn, the world has seen a 46% global increase in weather related disasters since 2000. This contributed to \$129 US billion of economic losses caused by climate related events in 2016 alone. 99% of losses in low-income countries are currently uninsured.

As an international research collaboration, the Lancet Countdown will help ensure the case for action on health and climate change is better evidenced and understood. It is partnering and funded by the Wellcome Trust, a leading global charitable foundation based in the UK, which is committed to stimulating research on health and climate change. A key driver of its support for the initiative comes in finding ways to reduced and avoid the further risks to public health that climate has been shown to create and exacerbate.

Analysis across five separate themes and the 40 indicators that form the basis of the 2017 report, provides the first global stocktake of the issue. Publishing its research annually in The Lancet, its findings are intended to help inform an accelerated policy response to climate change and equip health professionals in managing its implications.

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URL link to report, for inclusion in content (live from 23:30 GMT, 30 October) see:

<http://www.lancetcountdown.org/the-report>.

For additional supporting embargoed media materials see: <http://bit.ly/2yMcvX2>

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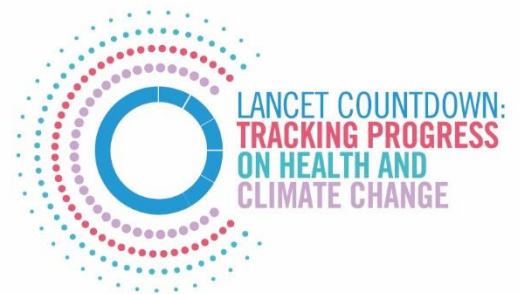
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**Notes for Editors:**

1) Supplemental analysis by the Lancet Countdown. The figures provided - 920,000 people globally and 418,000 in India - represent an equivalent number of labourers removed from the workforce,

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representative of the overall decline in ability to undertake outdoor labour in rural areas. The figures provided are for 2016, with labour loss being the times when heat and humidity reach a certain level that they render physical labour effectively impossible. A 2% fall in productivity was seen between 2015 and 2016 alone. Figures represent change relative to the mean conditions, effectively as change on top of what these regions would have experienced historically. Strictly speaking these impacts are felt across a much broader swath of the population. This still threatens the livelihoods and ability of subsistence farmers in particular to support themselves and their families.

2) 2015 Lancet Commission: Health and climate change: policy responses to protect public health (see [link](#)).

3) What is Dengue, World Health Organisation (see [link](#)).

4) 2015 Lancet Commission: Health and climate change: policy responses to protect public health (see [link](#)).

5) The research shows the health related influence of climate change across a broad spectrum of issues. This includes the impacts of extreme weather events, flooding, heatwaves, increased spread of infectious disease, growing rates of undernourishment and malnutrition, a failure to address air pollution, through to broader economic impacts such as reduced labour capacity, population displacement and involuntary migration. Issues in turn such as challenges to mental health and increased incidence of violent conflict are increasingly associated with climate change and an area of growing investigation. These are all factors that lead to direct or secondary health impacts or impact personal wellbeing, leading to a decline in living standards, exposure to new health risks, higher rates of illness, the complication of existing health conditions or premature loss of life.

6) The random sample analysis undertaken by the Lancet Countdown provides a balanced and weighted representative analysis of cities globally using data from a core WHO database. Accompanying context is provided in 'Indicator 3.5: Exposure to ambient air pollution' within the body of the 2107 Lancet Countdown report.

#### **About the Lancet Countdown: Tracking Progress on Health and Climate Change:**

The Lancet Countdown: Tracking Progress on Health and Climate Change (Lancet Countdown) is an international research collaboration, dedicated to tracking the world's response to climate change, and the health benefits that emerge from this transition. Reporting annually in *The Lancet*, its goal is to support an accelerated and adequate response to climate change, by informing the work of policymakers in health and other sectors, while also engaging the health profession in responding to the challenge.

The indicators included in the report will evolve over time in response to feedback and data improvements. The Lancet Countdown is funded by the Wellcome Trust and supported by *The Lancet*, working in special collaboration with the World Health Organization, World Meteorological Organization as its UN partners.

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

For additional information on *The Lancet* content on health and climate change see: <http://www.thelancet.com/climate-and-health>

**The full list of the participating institutions includes:** Centre Virchow-Villermé, European Centre for Environment and Human Health, Imperial College London's Grantham Institute, International Livestock Research Institute, Iranian Fisheries Research Organization, London School of Hygiene & Tropical Medicine, NHS Sustainable Development Unit, The Centre for Climate & Security, Tehran University of Medical Sciences, Tsinghua University, Umea University, United Nations University, Universidad Peruana Cayetano Heredia, University College London, University Colorado-Boulder, University of Birmingham, University of Essex, University of Exeter, University of Reading, University of Sussex, University of Washington, University of York, World Bank, World Health Organization and World Meteorological Organization.

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