

# Health impacts of climate change already felt today

October 31 2017, by Hayley Dunning

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Credit: Imperial College London

A *Lancet* report warns climate change is impacting health, labour productivity, infectious diseases and exposure to air pollution and heatwaves.

These threats, among others, are affecting countries worldwide, according to the first report of *The Lancet Countdown on Health and Climate Change*, which includes contributions from Imperial College London researchers.

While there is some evidence of early adaptation and mitigation strategies being implemented in some areas, the authors warn that further progress is urgently needed.

Some of the major findings include:

- Between 2000-2016, there has been a 46 percent increase in the number of weather-related disasters, and 125 million adults aged over 65 were exposed to heatwaves
- Increasing temperatures have led to around 5.3 percent loss in labour productivity, and economic losses linked to [climate](#)-related extreme weather events were estimated at US\$129 billion in 2016
- Disease-carrying capacity of just one type of dengue-carrying mosquito has increased by 9.4 percent since 1950 as a result of rising temperatures
- Global exposure to dangerous levels of [air pollution](#) has increased by 11.2 percent since 1990, with 71 percent of 2971 cities exceeding recommended levels of PM2.5 (small pollution particles)
- Increase in electric cars, generation of renewable energy, and [health](#) adaptation spending show that momentum is building, but further progress is urgently needed

The Lancet Countdown on Health and Climate Change is a comprehensive annual analysis tracking progress on climate change on 40 key indicators. The project is a collaboration between 24 academic institutions, including Imperial College London, and intergovernmental

organisations including the World Health Organisation and World Meteorological Organisation.

By combining multiple data sources, undertaking new analysis and devising new indicators, the report tracks progress in five areas: climate change impacts - exposures and vulnerabilities; adaptation planning and resilience for health; mitigation actions and health co-benefits; economics and finance; and political and public engagement.

## **Health impacts of climate change already felt today**

Dr Kris Murray, one of the authors of the report from the Grantham Institute at Imperial, collaborated on an analysis of the infectious disease risks of climate change. They found that for one species of mosquito that transmits dengue fever, since 1950 there was a 9.4 percent increase in their capacity to transmit the disease. The number of cases of dengue fever has nearly doubled every decade since 1990.

Dr Murray said: "Dengue is just one example of an infectious disease that is likely to become more impactful as the climate changes. Warming temperatures and changing rainfall patterns can also help diseases appear in new places, and could even contribute to the emergence of entirely new diseases."

The number of people with under-nutrition in 30 countries in Asia and Africa has also increased from 398 to 422 million since 1990. Climate change is expected to have an impact on crop production, with a 1°C rise in temperatures associated with a 6 percent decline in global wheat yields and a 10 percent decrease in rice grain yields.

## **Challenging outlook but opportunity for advancement**

Professor Anthony Costello, Co-Chair of *The Lancet Countdown* and a Director at the World Health Organization said: "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."

Between 2007 and 2016, there were on average 306 weather-related disasters (mainly floods and storms) per year, representing a 46 percent increase since 2000. As events worsen over time, the authors warn that current levels of adaptation will quickly become insufficient.

## **Adaption and mitigation: prevention is better than cure**

An increasing number of countries and cities are developing preparedness plans to mitigate the impact of [climate change](#). In 2016, 449 cities worldwide reported having undertaken a risk assessment. However, the majority were in high income countries, with 83 percent of European cities surveyed, compared to 28 percent of African cities.

Climate-related events, such as storms or floods, can impact the capacity to provide medical care, for example by interrupting electricity supply, transport, communications or IT. Adaption spending for health accounts for 4.6 percent of total global adaptation spending, and the authors call for scale-up of financing for climate resilient health systems.

In 2015, more energy from renewable sources (solar, wind, hydroelectric) was added to the global energy mix, compared to fossil fuels. However, to remain on the pathway to reaching the Paris Agreement by 2050, this needs to increase by 2.5 times the current levels.

Provided by Imperial College London

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