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NEWS

Weather related disasters increased by 46% from 2007 to 2016, review says

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Climate change is already having significant effects on health, an international team has reported in the *Lancet*.[1]

An increase in the number of weather related disasters, greater exposure to heatwaves, and an increased risk of dengue fever because conditions are more favourable for mosquitoes are cited in support of the contention from the Countdown on Climate Change and Health team.

But four members of the team, appearing at a briefing at the Science Media Centre in London, said that they had not attempted to draw up a balance sheet that included possible benefits of increasing temperatures.

"We're not ducking the potential benefits," said Hugh Montgomery, co-chair of the group and director of the Institute for Human Health and Performance at University College London, "but it's quite hard to see what they are." He added that winter deaths in the UK were already diminishing because of central heating and better housing standards, so it was unlikely that milder winters would provide a dividend.

Another member of the team, Peter Cox of the University of Exeter, said: "Positive benefits of climate change may be there, but they are not easy to get a handle on."

The report focused on the negative aspects of global warming, as well as ranging widely into economics, air pollution, and the efforts made to slow down climate change.

A key underpinning assumption is that the rise in temperatures where people live is much higher than the average increase in global temperatures as a whole. "We live on land and warming on the land is much greater than it is over the oceans," said Cox, "so the actual increases that have been experienced are much bigger than the global average." Between 2000 and 2016 human exposure to warming was 0.9°C, more than double the global average for the period, the report said.

As a result, the number of people exposed to heatwaves rose by 125 million over those years, with resulting increased risk of heat stroke, worsening heart failure, and dehydration leading to kidney injury. Weather related disasters increased by 46% between 2007 and 2016 compared with the 1990-99 average, with deaths mostly occurring in poorer countries.

Flood and storm reports have increased substantially, although more complete reporting could account for some of the rise. Fewer people died as a result of these events—which optimists might put down to greater preparedness or sceptics to the limitations of the data.

Looking at infectious diseases, the team found rapid declines in diarrhoeal disease, malaria, and malnutrition, and rises in malignant melanoma and dengue fever. In 2013 there were more than 58 million cases of dengue fever, accounting for 10 000 deaths. "Climate change has been suggested as one potential contributor to this increase in burden," the report said.

But no attempt was made to find out if other vectors might be disadvantaged by global warming, nor is the increase in the vectoral capacity of the mosquito especially impressive. The report says that it has increased by 8.4% since 1950.

The report discussed efforts made to mitigate the effects of climate change but co-author Georgina Mace of University College London said that, so far, it was possible only to look at processes and systems, not to judge whether they work. Many countries have developed mitigation policies but she questioned whether enough was being done.

Investment in coal fired power capacity has gone into reverse after peaking in 2013, Paul Wilkinson of the London School of Hygiene and Tropical Medicine said, largely as a response to changes in policy in China. Investment in non-fossil fuels is also rising—especially photovoltaic cells.

1 The Lancet countdown on health and climate change: from 25 years of inaction to a global transformation for public health. *Lancet*. 2017. www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)32464-9/fulltext?elsca1=tlpr.