

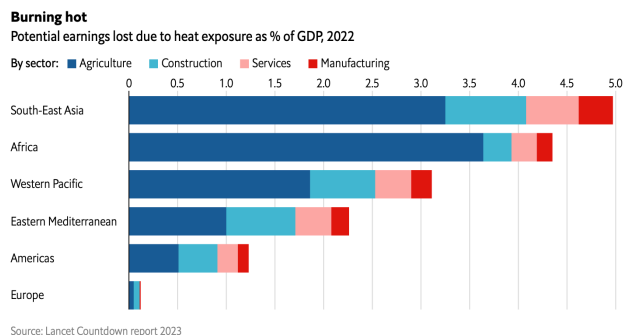
Burning issue

What happens when it is too hot to work?

Heat hurts both human health and economies

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“For too long health has been a footnote in climate discussions,” Tedros Adhanom Ghebreyesus, the director-general of the World Health Organisation, told delegates at [COP28](#). The climate summit, which has been held almost every year since 1995, placed a greater emphasis on the effects of climate change on human health this year. The topic has moved up the agenda partly because of a growing understanding of just how deadly hotter temperatures can be.



Excess heat exacerbates existing medical conditions like lung disease or cardiovascular problems, making them more lethal. It also raises the risk of dehydration which can lead to kidney problems. The very worst extremes of heat and humidity can make it impossible for people to cool down; in effect, their organs cook. In America alone it is thought that heat waves kill more people each year than any other type of natural disaster. A recent study by the *Lancet*, a medical journal, tried to calculate the effect that this can have on economies (see chart).

The study estimated that high temperatures led to 490bn lost hours of labour in 2022 (meaning that a combination of factors such as heat and sunlight made it too dangerous to work). Global GDP was \$863bn smaller than it would otherwise have been. That is more than triple the amount lost from extreme weather events such as hurricanes and floods. The authors caution that their estimates do not take into account labour in the informal economy.

Agriculture, which requires workers to spend long hours toiling outdoors, was overwhelmingly the most affected sector. This hit poorer regions the hardest: they are both more reliant on farming and are often the hottest to begin with. Across all industries, potential earnings lost because of heat exposure accounted for nearly 5% of overall GDP for countries in South-East Asia, and more than 4% of GDP for those in [Africa](#).

That is expected to get only worse. Annual global temperatures are now, on average, between 1.1°C and 1.2°C above pre-industrial levels. Should that rise to just under 2°C, heat-related labour loss will increase by another 50%, according to the report.

The *Lancet* study was an estimate based only on days that are too hot to work in formal, paid sectors (it excludes unpaid labour and the informal economy.) But climate change will worsen the health of people and economies in other ways, too. Hotter seas have allowed bacteria that cause fatal diseases and sepsis to spread into new stretches of the world’s coastlines; warmer, wetter weather has let vectors like mosquitoes transmit malaria, dengue and West Nile virus to new populations.

Climate change will not only make temperatures too dangerous to work in some places, with serious consequences for economic output. It will also make others too sick to work, and impose on society the additional costs of caring for them.■

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