

Cities may be 8°C hotter by 2100: study

Under a dual onslaught of global warming and localised, urban heating, some of the world's cities may be as much as 8°C warmer by 2100, researchers warned on Monday, 29 May.



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Such a temperature spike can have dire consequences for the health of city-dwellers, robbing companies and industries of able workers, and put pressure on already strained natural resources such as water.

The projection is based on the worst-case-scenario assumption that emissions of planet-warming greenhouse gases continue to rise throughout the 21st century.

The top quarter of most populated cities, in this scenario, could see the mercury rise 7°C or more by century's end, said a study in the journal *Nature Climate Change*.

For some, nearly 5°C of the total would be attributed to average global warming.

The rest would be due to the so-called urban heat island (UHI) effect, which occurs when cooling parks, dams and lakes are replaced by heat-conducting concrete and asphalt - making cities warmer than their surrounds, the researcher said.

"The top 5% (of cities per population) could see increases in temperatures of about 8°C and larger," study co-author

Francisco Estrada of the Institute for Environmental Studies in the Netherlands told AFP.

Estrada and a team used different projections of average planetary warming, combined with the UHI effect and potential harms, to estimate the future costs of warming on cities.

The median city, right in the middle of the range, stands to lose between 1.4% and 1.7% of GDP per year by 2050 and between 2.3% and 5.6% by 2100, they concluded.

"For the worst-off city, losses could reach up to 10.9% of GDP by 2100," wrote the team.

UHI "significantly" increases city temperatures and economic losses from global warming, they added.

This meant that local actions to reduce UHI - such as planting more trees or cooling roofs and pavements - can make a big difference in limiting warming and minimising costs.

Cities cover only about 1% of earth's surface but produce about 80% of gross world product and account for around 78% of energy consumed worldwide, said the researchers.

They produce more than 60% of global carbon dioxide emissions from burning coal, oil and gas for fuel.

The world's nations agreed in Paris in 2015 to the goal of limiting average global warming to 2°C over pre-industrial revolution levels by curbing greenhouse gas levels in Earth's atmosphere.

For the latest study, researchers used data from the world's 1,692 largest cities for the period 1950 to 2015.

Source: AFP

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