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Headline: July hotter for 4 out of 5 humans on Earth – study

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HUMAN-CAUSED global warming made July hotter for four out of five people on Earth, with more than 2 billion people feeling climate change-boosted warmth daily, a flash study revealed.

More than 6.5 billion people, or 81 percent of the world's population, sweated through at least one day where climate change had a significant effect on the average daily temperature, said a new report issued on Wednesday by Climate Central, a science nonprofit organization that has figured a way to calculate how much climate change has affected daily weather.

"We really are experiencing climate change just about everywhere," Climate Central Vice President for Science Andrew Pershing said.

Researchers looked at 4,711 cities and found climate-change fingerprints in 4,019 of them for July, which other scientists said is the hottest month on record. The new study calculated that the burning of coal, oil and natural gas had made it three times more likely to be hotter on at least one day in those cities.

In the United States, where the climate effect was largest in Florida, more than 244 million people felt greater heat due to climate change during July.

For 2 billion people, in a mostly tropical belt across the globe, climate change made it three times more likely to be hotter every single day of July. Those include the million-person cities of Mecca in Saudi Arabia and San Pedro Sula in Honduras.

The day with the most widespread climate-change effect was July 10, when 3.5 billion people experienced extreme heat that had global warming's fingerprints, said the report. That's different than the hottest day globally, which was July 7, according to the University of Maine's Climate Reanalyzer.

The study is not peer-reviewed — the gold standard for science — because the month just ended. It is based on peer-reviewed climate fingerprinting methods that are used by other groups and are considered technically valid by the National Academy of Sciences. Two outside climate scientists told The Associated Press (AP) that they found the study to be credible.

More than a year ago, Climate Central developed a measurement tool called the Climate Shift Index. It calculates the effect, if any, of climate change on temperatures across the globe in real time, using European and US forecasts, observations and computer simulations.

To find if there is an effect, the scientists compare recorded temperatures to a simulated world with no warming from climate change and it's about 2 degrees Fahrenheit (1.2 degrees Celsius) cooler to find out the chances that the heat was natural.

"By now, we should all be used to individual heat waves being connected to global warming," said Princeton University climate scientist Gabriel Vecchi, who wasn't part of the study. "Unfortunately,

this month, as this study elegantly shows, has given the vast majority of people on this planet a taste of global warming's impact on extreme heat."

In the US, 22 cities had at least 20 days when climate change tripled the likelihood of extra heat, including Miami, Houston, Phoenix, Tampa, Las Vegas and Austin.

The US city most affected by climate change in July was Cape Coral, Florida, which saw fossil fuels make hotter temperatures 4.6 times more likely for the month and had 29 out of 31 days where there was a significant climate change fingerprint.

The farther north in the US, the less of a climate effect was seen in July. Researchers found no significant effect in places like North Dakota and South Dakota, Wyoming, northern California, upstate New York and parts of Ohio, Michigan, Minnesota and Wisconsin.

Heat waves in the US Southwest, the Mediterranean and even China have gotten special analysis by World Weather Attribution finding a climate change signal, but places like the Caribbean and Middle East are having huge climate change signals and not getting the attention, Pershing said. Unlike the other study, this one looked at the entire globe.