'Florida really tops the charts' of states climate change will heat up, report says

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Miamians are already used to stifling heat waves that leave them sprinting from air-conditioned cars to air-conditioned buildings or flocking to the beach to cool off. Or so they think.

But if a new report on climate-change induced global warming is right, residents could feel the heat a lot more by the middle of the century.

Scientists from the climate advocacy group Union of Concerned Scientists are predicting that the city could go from a couple weeks a year that feel like 100 degrees to nearly four months of scorching hot days, with the rest of Florida not far behind.

High temperatures are linked to all kinds of health problems, from heart and lung conditions to exacerbating mental health issues. In South Florida, almost a dozen elderly people elderly people died when the air conditioning went out after Hurricane Irma. Soaring thermometer readings have already forced some outdoor workers to shift their labor earlier or later in the day.

"Florida really tops the charts on so many different metrics," said Erika Spanger-Siegfried, lead climate analyst for the group. "The southeast region leads the nation, and Florida is the state within that region that will be most affected."

Spanger-Sigfried and her team analyzed historical heat records from 1970 to 2000 to come up with historical averages for cities, counties, states and regions in the lower 48 states, and used 18 different climate models to project temperatures into the future. What they found: with no action to cut carbon emissions, temperatures could soar to harmful, even deadly, levels by mid-century.

High temperatures are historically most common in the southwest, where it got so hot in 2017 that airplanes couldn't take off.

But it's not temperature alone that matters for physical well-being. As most Floridians already know, it's not the heat—it's the humidity.

"Our bodies can cope with high temperatures if we can sweat," said Spanger-Siegfried. "But as the humidity rises, it gets harder for our body to cool."

The heat index is a combination of temperature and humidity that results in a "feels like" temperature.

Right now, there are about 25 days a year that feel like they're above 100 degrees in Florida, like the heatwave last month. Without action to change emissions, scientists estimate there will be 105 of those 100 degree plus days a year in Florida in a few decades, around 2036 to 2065. By late century, that number could climb to 141 days.

Predictions for Miami-Dade County are worse. Instead of the statewide average of 25 days where it feels like 100 degrees, Miami-Dade already has 41 and by the middle of the century, that could be 134. That's more than any other county in the state.

The researchers created an interactive tool to show how hot it might get in specific cities and counties depending on how much climate change is slowed, or if it's not slowed at all.

More hot days spells trouble for outdoor workers, who don't always have strict guidelines for breaks. More than half of agricultural workers in Homestead surveyed by the organization WeCount! last year reported they weren't allowed to rest in the shade, and 69% said they had experienced symptoms of heat-related illness.

It doesn't help that the natural instinct when the temperatures rise is to crank up the AC, which Spanger-Siegfried pointed out consumes even more electricity and burns even more fuel.

"If we use dirty sources of fuel to keep our indoor areas cool, we're making our outdoor areas warmer," she said.

Not that everyone even has AC. Federal rules for public housing don't require air conditioning, leaving low-income residents to buy their own

or suffer without one.

On a hotter planet, people who use public transit will also bear the brunt of the higher temperatures. While Miami often reaches intense temperatures, the county installed its first—and what appears to be its only—air-conditioned bus stop in 2016.

A cheaper way to cool down urban areas, which are usually hotter than rural areas thanks to all the metal, glass and pavement, is nature's original solution: trees. Miami-Dade did a tree canopy survey in 2016 with the University of Florida and Florida International University and found that the county has about 20% of its land covered by trees, out of a possible 44 percent. Researchers found the trees were clustered in wealthier, whiter neighborhoods like Coral Gables and were lacking in lower income neighborhoods primarily occupied by people of color.

The county began the Million Trees Miami program to solve the problem and bring the total average canopy in the county up to 30% by 2020. They've since scrapped the deadline, said Gabriela Lopez, community image manager for Neat Streets Miami, and instead just focus on adding trees wherever they can.

"We have been able to record the planting of approximately 300,000 trees. However, we know that more trees have probably been planted since the initiative began," she said.

But while trees can help cool down a neighborhood, soak up flood waters and even raise property values, the ultimate solution to stop rising temperatures at their source is to emit less into the atmosphere, said Spanger-Siegfried.

"We need to start and end with thinking about making emissions cuts," she said.