

Carbon footprint maps reveal urban-suburban divide

January 17 2014, by Tony Barboza

Where you live in a metropolis - the city or the suburbs - can make a huge difference in how much you are contributing to climate change, according to a new study.

People in the densely populated cores of big cities are responsible for less [greenhouse gas emissions](#), but the more carbon-intensive lifestyle of their far-flung suburbs cancels out any of the benefits, researchers at the University of California, Berkeley, found.

The analysis used household income, vehicle ownership, home size, population density, weather and other data to estimate how different areas of the United States contribute to [greenhouse gas](#) emissions at the household level.

Researchers found a striking divide: low-carbon city centers ringed by suburbs where households are responsible for an outsize proportion of greenhouse [gas emissions](#). In many big metropolitan areas like New York or Los Angeles, their research found, a family that lives in the urban core has about a 50 percent smaller carbon footprint than a similar-sized family in a distant suburb.

"The affluent suburbanites that commute long distances more than make up for the low-transportation footprint of urban dwellers," said Daniel Kammen, a professor of energy at UC Berkeley.

As part of the project, researchers produced interactive maps

(coolclimate.berkeley.edu/maps) where users can see average household carbon footprints at the ZIP Code level and how much of it is related to transportation, housing, food, goods and services.

"You can see the green urban cores and the carbon shadows of the suburbs," Kammen said.

The study revealed big regional disparities as well.

A greater portion of carbon footprints in the Midwest are related to housing because of the region's cold winters and its reliance on more carbon-intensive coal to generate electricity. California has a cleaner energy portfolio but people drive a lot, so household carbon footprints there are dominated by emissions from transportation.

The study, funded by the National Science Foundation and the California Air Resources Board, was published in the journal *Environmental Science & Technology*.

The group behind the research, known as the Cool Climate Network, also produced a tool that allows users to calculate their carbon footprint and see how it compares to their neighbors. It is available at coolclimate.berkeley.edu/carboncalculator.

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