

City dwellers produce as much CO₂ as countryside people do: study

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(PhysOrg.com) -- Most previous studies have indicated that people in cities have a smaller carbon footprint than people who live in the country. By using more complex methods of analysis than in the past, scientists at Aalto University in Finland have discovered that people's carbon emissions are practically the same in the city and in the rural areas. More than anything else, CO₂ emissions that cause climate change are dependent upon how much goods and services people consume, not where they live.

In their study, Researcher Jukka Heinonen and Professor Seppo Junnila allocated [carbon emissions](#) to their consumption location, not their production location.

"If a [TV set](#) is made in a factory in the countryside but bought and used by a person in a town, the [carbon emission](#) generated from making the television should be allocated to the consumer, not to a manufacturer making it for the consumer," said Jukka Heinonen.

This study used a brand new hybrid life cycle analysis (LCA) approach to quantify carbon emissions by looking at production, monetary transactions and consumption statistics to accurately track usage. Hybrid life cycle analyses, including emissions people have caused outside of their home regions, have not been conducted in the past because the investigation had been too complicated to perform. Unlike previous studies, researchers were also able to measure the impact of consumed services on the [carbon footprint](#).

The researchers found that carbon consumption was directly linked to income and consumption habits.

"For instance, rich people fly more and, as a result, produce much more [CO2 emissions](#) than people earning less," Heinonen says.

The researchers studied people in two largest metropolitan areas in Finland, the Helsinki region and the Tampere region. They found that the biggest impacts on a person's carbon footprint were housing energy, heat and cooling as well as construction and maintenance of buildings, and private transportation. Transportation increases the carbon footprint in the countryside, but the impact of that is minimal compared to other factors.

The study has been published in *Environmental Research Letters (ERL)*.

More information: Paper:
iopscience.iop.org/1748-9326/6/1/014018/fulltext

Provided by Aalto University

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