

MCC Press Release

Quality of life increases when we live, eat and travel energy-efficiently

In a comprehensive research project a global team of experts explores the connection between "demand-side climate solutions" and "human well-being".

Berlin, 25/11/2021. The supply of renewable energy and energy-efficient production is only one side of climate mitigation. According to scientific scenarios, limiting global heating as agreed in the Paris Agreement also requires "demand-side climate solutions", which primarily curb the consumption of energy in private households. Their potential is great: they can save 40 to 80 percent of greenhouse gas emissions in the buildings, transport, food, and consumer products sectors. And they do not require suffering or hardship but can usually improve the quality of life. This is the conclusion of a research team from 17 countries, led by the Berlin-based climate research institute MCC (Mercator Research Institute on Global Commons and Climate Change). The study is published in the renowned journal *Nature Climate Change*.

"We identified the main demand-side solutions" says [Leila Niamir](#), a researcher in the MCC working group Land Use, Infrastructure and Transport and a lead author of the study. "They include active travelling, like walking or cycling, as well as a shift to healthy and animal-free protein diets, and reusing and recycling materials. We assessed the impacts on climate, environment, and human well-being and demonstrated that – different from public view and impression – demand-side solutions are not in contradiction with quality of life and comfort. In fact, they have beneficial effects on well-being outcomes with a large mitigation potential magnitude."

The research team filtered out around 600 relevant publications from 54,000 peer-reviewed scientific articles, evaluated the statements that were important for the study in a structured process, and coded them according to a standardised scheme. An interactive database shows how the connection between climate protection and quality of life is derived for the 306 sub-aspects examined and indicates the level of emissions that can be saved. The effect on wellbeing is 79 percent positive, 18 percent neutral, and only 3 percent problematic. Examples of positive combinations include higher life expectancy with a more plant-based diet, improvements in air quality when replacing the burning of coal and oil and enhanced social cohesion in climate-friendly cities. The analysis was carried out from a global perspective, with participation from institutes in Mexico, India, Australia, Japan, and the USA.

The study also dispels the notion that demand-side climate solutions ultimately depend on the individual's personal initiative. "Policymakers are just as challenged here as they are on the supply side with the expansion of renewable energies," emphasises [Felix Creutzig](#), working group leader at MCC and also lead

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author of the study. "Behavioural changes do not take place in a vacuum, they depend very much on infrastructure offers and new service systems – such as safe cycle paths and canteens that cook high-quality vegan food. And this is also about social norms, which are not set in stone but are malleable, as is currently being intensively discussed in the context of the coronavirus pandemic."

The research project was carried out not least with a view to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, especially the partial report on climate protection expected in Spring 2022. There, as Coordinating Lead Author, MCC researcher Creutzig is in charge of the chapter on demand-side climate solutions, which is included in the report for the first time. "Energy-efficient living, eating, and travelling will become quite important if we want to avert catastrophic climate change," he says. "The study we're presenting now, assesses this consistently for the first time, both in terms of emissions and quality of life."

About MCC

The MCC explores sustainable management as well as the use of common goods such as global environmental systems and social infrastructures against the background of climate change. Our seven working groups are active in the fields of economic growth and development, resources and international trade, cities and infrastructure, governance and scientific policy advice. The MCC was co-founded by the Mercator Foundation and the Potsdam Institute for Climate Impact Research (PIK).

Reference of the cited article:

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