

MCC Press Release

Special focus issue on demand-side climate solutions edited by MCC researchers

It compiles 22 meta-studies on energy-saving options, complementing supply-side options towards fossil-free energy and energy-efficient production.

Berlin, 27/03/2024. What can individuals do to combat global heating? Scientific research increasingly acknowledges that climate protection is not just about the supply of wind and solar power or hydrogen pipelines, for example. It is also about personal consumer behaviours when it comes to eating, living and travelling. The renowned journal *Environmental Research Letters* is now devoting a focus issue to these “demand-side climate solutions”. The editors of the issue are Indian economist Joyashree Roy and two group leaders from the Berlin-based climate research institute MCC (Mercator Research Institute on Global Commons and Climate Change).

“With this comprehensive overview, we are driving forward the topic of behavioural change in the climate policy debate, and promoting networking in the research community,” explains [Felix Creutzig](#), head of the MCC working group Land Use, Infrastructure and Transport. The focus issue collects 22 meta-studies (already published individually online) and offers a detailed editorial.

Here, the editors summarise the current state of knowledge, identifying key findings and highlighting gaps for further research. Felix Creutzig and Joyashree Roy have already advanced the topic together in 2022: as “Coordinating Lead Authors”, they oversaw the chapter on demand-side solutions, which was included for the first time in the [most recent Assessment Report](#) of the Intergovernmental Panel on Climate Change (IPCC).

The meta-studies in the focus issue deal with individual lifestyles, the contribution of urban administration and urban development, relevant areas of transport, buildings and nutrition, and aspects of the circular economy, material efficiency and digitalisation. The editorial highlights the tripartite division emerging in the research: “Avoid – Shift – Improve”. While some demand-side solutions are aimed at avoidance (e.g., flying), others are about shifting (e.g., from gas heating to heat pumps) or improving (e.g., building insulation).

The editorial emphasises that the greatest amount of greenhouse gas emissions can be saved in the area of nutrition. Overall, demand-side solutions can reduce emissions by at least 40 percent by 2050, with benefits for [quality of life](#) and driving progress on the Sustainable Development Goals defined by the United

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Nations. For individuals to have climate-friendly options, though, it is important that policymakers provide the appropriate infrastructure, such as trams or cycle paths to enable greener transport choices.

According to the editorial, research into demand-side solutions can make an important contribution to addressing the climate crisis for three reasons. First, because of the timeframe: these solutions can reduce emissions in the short term, whereas established climate policy models tend to focus on development paths up to 2050 or 2100. Second, because of interdisciplinarity: this subject area draws on important new impulses from psychology, sociology, political science and anthropology, for example. And third, because of the broader perspective: now that climate solutions related to energy supply are quite well understood, the demand-side picture is also becoming more fine-grained. For example, the IPCC is planning a special report for 2027 on emission avoidance in cities.

“The fact that we have filled this issue exclusively with meta-studies highlights the wealth of knowledge already existing in this young branch of climate science,” says [Jan Minx](#), head of the MCC working group Applied Sustainability Science, also an IPCC Coordinating Lead Author in 2022 and now a co-editor of the focus issue. “Research synthesis – compiling relevant individual studies and identifying key results – has become crucial for demand-side solutions,” emphasises Minx. “This gives policymakers a basis for considering climate-friendly lifestyle incentives and infrastructure policies. In view of the urgency of the climate crisis, this field of action must not be neglected.”

Reference of the cited article:

Creutzig, F., Roy, J., Minx, J., 2024, Focus on Demand-side climate change mitigation: Where do we stand and ewhere do we go?, *Environmental Research Letters*

<https://iopscience.iop.org/article/10.1088/1748-9326/ad33d3>

About MCC

MCC explores and provides solution-oriented policy portfolios for climate mitigation, for governing the global commons in general, and for enhancing the many aspects of human well-being. Our six working groups are active in fields like economic growth and development, resources and international trade, cities and infrastructure, governance, and scientific policy advice. Co-founded by the Mercator Foundation and the Potsdam Institute for Climate Impact Research. | www.mcc-berlin.net/en | https://twitter.com/MCC_Berlin

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