

MCC Press Release

Cleaning up emissions from our atmosphere

The issue of "negative emissions" is moving up the agenda, and governments are setting concrete goals. MCC provides an overview of the state of knowledge.

Berlin, 07.06.2021. For the major goal of "climate neutrality by 2050" (EU, USA), or "CO₂ neutrality by 2060" (China), greenhouse gas emissions must be quickly reduced towards zero – and even that will not be enough. To compensate for effectively unavoidable residual emissions, at least 100 gigatonnes of CO₂ must be removed from the atmosphere globally in the period up to 2100. Moreover, to meet the temperature targets of the Paris climate agreement, the world community will probably have to pay off a considerable "overdraft" of CO₂ in the atmosphere. An overview of the state of knowledge on carbon removal is now provided by the Berlin-based climate research institute MCC (Mercator Research Institute on Global Commons and Climate Change).

An MCC Policy Brief available on the website provides tentative estimates for global potentials and costs, shaped by removal options from afforestation and carbon sequestration in farmland to bioenergy plantations and air filter systems. The issue is already being set in targets. The German government recently decided to insert a paragraph on CO₂ uptake by land area into the Federal Climate Change Act. In addition, the new European Climate Law expects carbon removals "in all sectors" and envisages overall emissions being net negative after 2050. "In light of recent announcements, it is now imperative we close the striking innovation and policy gap that currently exists" says [Sabine Fuss](#), head of the MCC working group Sustainable Resource Management and Global Change and co-author.

The Policy Brief also addresses implementation. "We outline the governance structures needed to make negative emissions available," explains Fuss: "In the short term, it is about monitoring, innovation funding, and pilot projects. In the medium term, separate quantity targets and incentives for removals make sense, and in the long term, we should have a comprehensive carbon pricing architecture in which the state rewards carbon removals just as it charges for carbon emissions." The Policy Brief is based on an MCC working paper (in German language), which also provides tentative potential estimates for Germany.

The new MCC Policy Brief "Carbon removal: cleaning up emissions from our atmosphere" is available [here](#) for reading on the MCC website, and [here](#) for download (two pages).

About the 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

MCC was founded jointly by:

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).

Further information:

The MCC working paper “Wissensstand zu CO₂-Entnahmen” (state of knowledge on carbon removals) can be found [here](#) (37 pages, in German language).

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