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Regional assessment of biomass-based carbon dioxide removal and introduction of ”Carbon Cascadia”: A CDR removal game

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Carbon Dioxide Removal (CDR, also known as Negative Emissions) is positioned by the IPCC as a necessary component for achieving climate goals and is part of Germany's climate strategy. However, methods for removing CO2 are still not well known. The opportunities and risks of CDR are barely discussed, both among stakeholders and the general public.
In our talk, we will build on the research conducted on biomass-based CDR (bioCDR) in the project "BioNET – Multi-level Assessment of Biomass-based Negative Emission Technologies"to introduce a CDR removal game. Previous stakeholder processes and modelling have shown that bioCDR methods have significant CO2 removal potential but also face numerous challenges. Furthermore, our research indicates that no single CDR option can provide the necessary contributions to meet climate targets. Instead, a portfolio of methods is required to balance the weaknesses of individual approaches, maximize synergies, and consider co-benefits for the environment and society, alongside the removal potential (Otto/Matzner 2024).
Given this complex situation, the challenge is to clearly convey knowledge about various CDR methods and provide opportunities for discussion regarding their application and (competitive) relationships to one another. For this task, we designed a serious game called "Carbon Cascadia". It serves both as a communication tool and as a means of scientific data collection to better understand the complex interplay of different CDR options. The game has already been successfully tested in a simplified pilot version with stakeholders. Currently, we are developing it further as an online video game.

Otto, Danny/Matzner, Nils (2024): Let Us Get Regional: Exploring Prospects for Biomass-Based Carbon Dioxide Removal on the Ground. In: C, Multidisciplinary Digital Publishing Institute, 10 (1), 25.

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