

Donnerstag, 07.07.2022, 16.00 Uhr
Leipziger Meteorologisches Kolloquium

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„Legacy effects and cascading impacts of climate extremes on the carbon cycle”

Climate extremes impact ecosystems directly by imposing stress conditions that result in reduced CO₂ uptake. Depending on its severity, recovery from a given event can take several years to decades, so that impacts on carbon stocks and/or CO₂ uptake potential persist longer than the event itself. Climate extremes can also have indirect impacts on ecosystems e.g., by increasing the hazard of concurrent disturbances, such as fires or insect outbreaks that further amplify carbon losses. The increased frequency or intensity of climate extremes due to anthropogenic climate change has, therefore, the potential to increase the likelihood of impact cascades.

Here, I will discuss how understanding about legacy and cascading impacts of extreme events on ecosystem is crucial to anticipate future CO₂ mitigation potential by ecosystem, identify challenges in quantifying direct and lagged impacts of extreme events on ecosystem functioning and present recent studies trying to overcome some of these challenges.

Ort: LIM, Leipzig