

Leipziger Meteorologisches Kolloquium

Donnerstag, 19.01.2023, 16.00 Uhr,
LIM, Vor dem Hospitaltore 1, Seminarraum

online: <https://uni-leipzig.zoom.us/j/69158718944?pwd=M0hpR1ZoSkFWUEFHcldGMkpnTzltZz09>

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Reactive nitrogen in the environment and its effect on climate change

Humans have doubled levels of reactive nitrogen (Nr) in circulation, largely as a result of fertilizer application and fossil fuel burning. As a result, the global N cycle is even more severely altered by human activity than the global C cycle, and excess N pollution has been identified as one of the three global environmental issues whose 'planetary boundary' has been surpassed. Once an N atom is in a reactive form, it can contribute to a number of cascading environmental problems as it is transported through terrestrial and aquatic ecosystems (eutrophication) and into the atmosphere (air quality, N₂O and climate). Thus, Nr creation and use is linked to climate change, degradation of soil, air and water quality. In my talk I will discuss the trade-off between crop productivity, N fertilizer use, and greenhouse gas emissions of agricultural ecosystems; show latest research findings; and present strategies to reduce Nr losses to the environment.