## Donnerstag, 19.01.2023, 16.00 Uhr Leipziger Meteorologisches Kolloquium Dr. Clemens Scheer

Karlsruher Institut für Technologie (KIT)

## 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, N<sub>2</sub>O 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.

Link: <a href="https://uni-leipzig.zoom.us/j/69158718944?pwd=M0hpR1ZoSkFWUEFHcldGMkpnTzltZz09">https://uni-leipzig.zoom.us/j/69158718944?pwd=M0hpR1ZoSkFWUEFHcldGMkpnTzltZz09</a>

## Ort: Leipziger Institut für Meteorologie, Vor dem Hospitaltore 1, Seminarraum