

## **Critical thresholds of atmospheric deposition in view of changing climatic conditions**

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The assumption of steady state, i.e. that today's environmental parameters such as climate and land use will remain indefinitely stable, is central to the definition of critical loads of atmospheric deposition. Because this assumption is incorrect, it is imperative to be able to assess the implications of continuously changing environmental factors on the sensitivity of ecosystems to atmospheric pollutants. In recent years, a range of efforts have been directed at identifying these impacts, from laboratory experiments, to ecosystem monitoring, manipulations and dynamic modeling exercises. This talk compiles the results of long-term ecosystem monitoring, field experiments and dynamic modeling studies investigating the effects of climate change (temperature, precipitation, CO<sub>2</sub>) on terrestrial ecosystems. Evidence shows that while environmental changes will most certainly influence the response of ecosystem to air pollution, it is unclear how the critical thresholds will be affected. The concept of target loads may therefore be more robust in informing policy in the future.

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