



Cluster of the Technische Universität Dresden for greenhouse gas and water fluxes

Uta Moderow, Uwe Eichelmann, Thomas Grünwald, Heiko Prasse, Ronald Queck, Uwe Spank, and Christian Bernhofer

TU Dresden, Institute of Hydrology and Meteorology, Germany (uta.moderow@tu-dresden.de)

How different land uses change CO₂-fluxes under similar climatic conditions is a core question concerning the estimation of carbon sinks. Here, the TUD-cluster forms an excellent basis since it provides long-term measurements of Eddy-Covariance fluxes for different land uses. Measurements started at the Anchor Station Tharandter Wald (Spruce) in 1996. Since then the TUD-cluster has been successively complemented by continuous greenhouse gas flux observatories at Grillenburg (grassland), Klingenberg (crop rotation) and Spreewald (wetland), which have been operated since 2002, 2004 and 2010.

The results of the TUD-cluster have been shared internationally in research frameworks such as EUROFLUX and subsequent research frameworks and is now part of ICOS-D (Integrated Carbon Observation System), the German branch to ICOS Europe.

This contribution focuses on the presentation of the different sites with comparatively similar climatic conditions but different CO₂-fluxes, water fluxes and energy fluxes. Influences of management and climatic conditions will be shown which are apparent in long-term data as well as interesting aspects of distinct land uses.