

## **Impact of Land Use Changes on Extremes in the ARPEGE-Climat Model (LUCID Experiment)**

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Organized in the LUCID project, several groups have started an inter-comparison exercise to assess the impact of past land use changes on climate. The first step of the project is to run pairs of simulations with an atmospheric model, one using a land cover map for 1992 and the other for 1870. In CNRM, we have run an ensemble of 5 simulations with each land cover map, and we now assess the impact of land-use changes on extremes. This work is based on the analysis of the Stardex indexes as defined in Frich et al. (*Clim. Dyn.*, 2002). These indexes are particularly representatives of extreme events for mid-latitudes, regions where the land use change has been the most important over the 20<sup>th</sup> century.