Climate science: Millennia of hydrological data challenge model simulations (N&V)

* Climate sciences

**Embargo**

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A reconstruction of 1,200 years of variability in the interaction between water and climate (hydroclimate) for the Northern Hemisphere is presented in a paper published online this week in*Nature*. The evidence does not support the intensification of wet and dry extremes simulated by climate models for the twentieth century, the study suggests.

Fredrik Ljungqvist and colleagues analysed previously published records of precipitation, drought, speleothems, tree rings, marine sediments, ice cores and other indicators of hydroclimate variability, each spanning at least the past millennium across the Northern Hemisphere. They report that the ninth to eleventh and the twentieth centuries were comparatively wet and the twelfth to nineteenth centuries were drier, a finding that generally agrees with model simulations of precipitation and temperature covering the years 850–2005. However, their reconstruction does not support the tendency in simulations of the twentieth century for wet regions to get wetter and dry regions to get drier in a warmer climate. They conclude that more work is needed to assess the impact of human activity on the hydrological cycle.

**Article and author details**

1. **Northern Hemisphere hydroclimatic variability over the past twelve centuries**

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