

Examples of Climate Applications and Climate Services from the [ACRE \(Atmospheric Circulation Reconstructions over the Earth ACRE\)](#)-facilitated [20th Century Reanalysis Project \(1871-2012\)](#) (20CR)

- Swiss Re announced late 2014 that their new European winter storm model will be based on 20CR, and that they will be the first reinsurance group to use it as a basis to model winter storm risk in Europe (<https://openminds.swissre.com/stories/722/>
<http://meetingorganizer.copernicus.org/EGU2014/EGU2014-3448-1.pdf>)
- Assimilating no surface land temperatures, 20CR has reproduced both annual variations and centennial trends in land air temperatures, demonstrating the robustness of previous conclusions regarding global warming (Compo, G.P., P.D. Sardeshmukh, J.S. Whitaker, P.D. Jones, P. Brohan, and C. McColl, 2013: Independent confirmation of global land warming without the use of station temperatures. *Geophys. Res. Lett.*, **40**, **12**, 3170-3174, doi:10.1002/grl.50425.)
- The Met Office PRECIS team are part of the *Managing the Risks, Impacts and Uncertainties of drought and water Scarcity (MaRUIS)* project led by Oxford University (<http://www.mariusdroughtproject.org/>), in which at least one member of the 20CR ensemble output will be downscaled by the Met Office PRECIS regional climate modelling system to provide a high resolution baseline of UK droughts from 1850-2014
- An overview of various 20CR uses for climate services and applications, at least for Europe, is the following (Brönnimann, S. and O. Martius (Eds.), 2013: Weather extremes during the past 140 years. *Geographica Bernensia* **G89**, 108pp, DOI: 10.4480/GB2013.G89.01 - http://boris.unibe.ch/40665/1/GB2013_G89%20Book.pdf) A more broader assessment of 20CR applications can be found at <https://docs.google.com/viewer?a=v&pid=sites&srcid=bWV0LWFjcmUub3JnfGFjcmV8Z3g6MWEwMTRjMzI0ZmE0ZTEwNg>