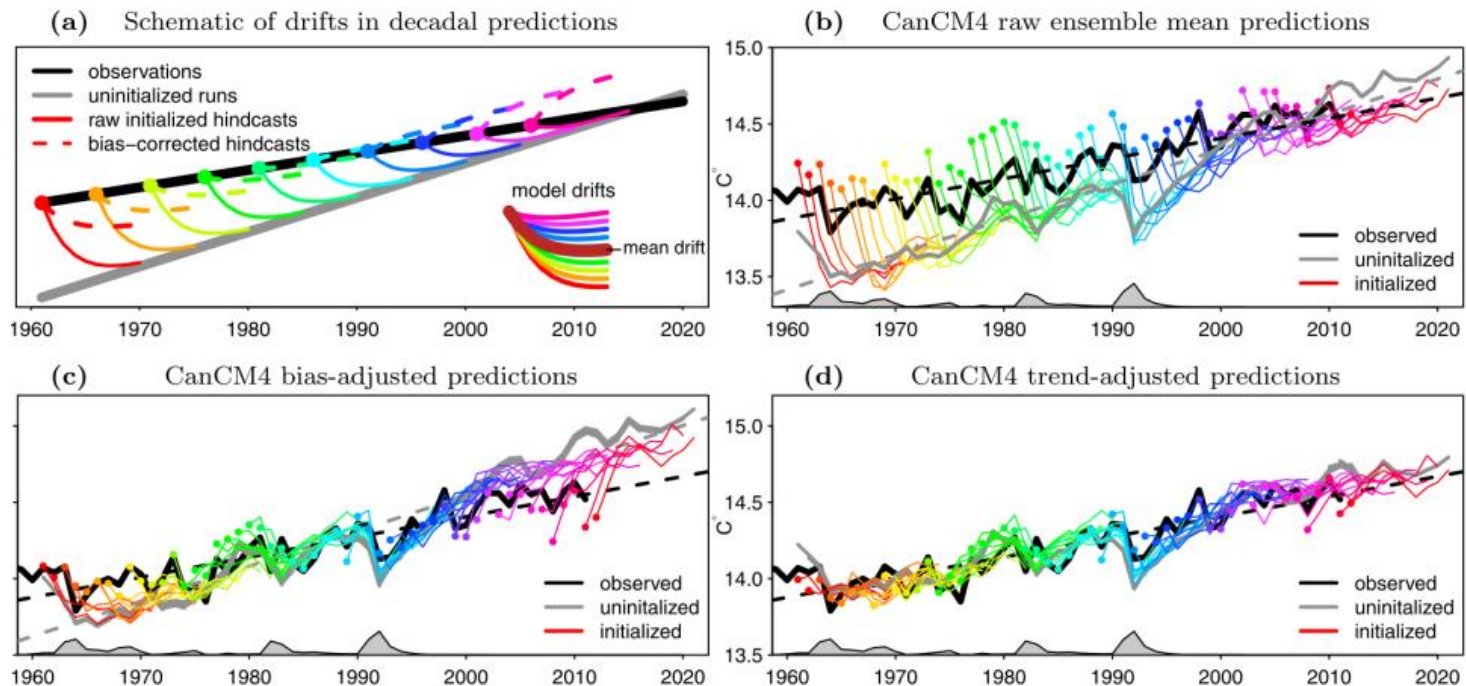


The drift and the bias struggle



- Early basic bias correction (DCPP/CMIP5, mean bias adjustment)
- Since then more sophisticated treatments developed (e.g. trend adjustment) but still required
- Example: GMT with CanCM4

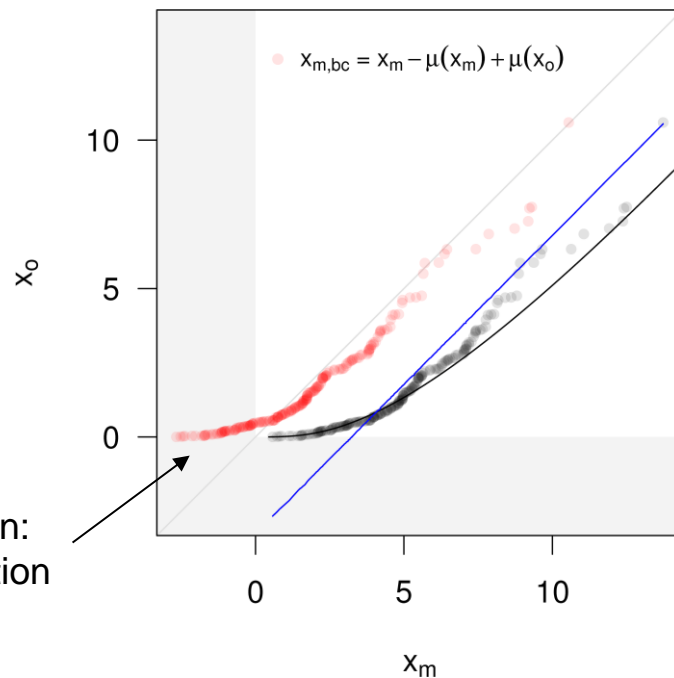
Data and bias correction for decadal climate predictions



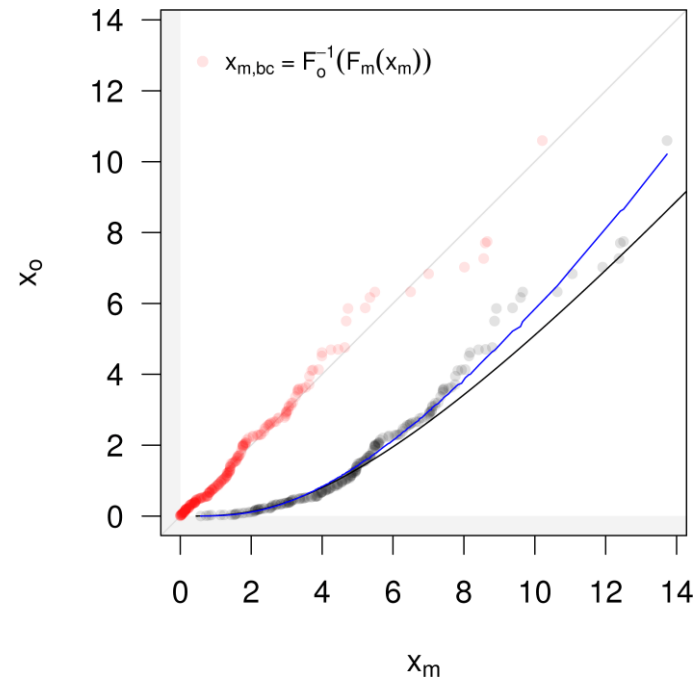
The drift and the bias struggle

- The recommended method based on mean bias correction is not applicable for skewed variables (e.g. precipitation), and correction with distribution function including higher order moments are more appropriate
- An example: quantile map for modelled and observed precipitation
- Other methods need to be considered, e.g. calibration, drift correction etc.
- Need to guideline GPC with respect to the bias and drift correction methods

correction with mean



correction with density function



Towards guidelines for bias/drift corrections

- May2016: WCRP Meeting on Bias and Drift correction and DCPD Meeting, Barcelona @IC3, organized by Paco et al.
 - DCPD Recommendations for CMIP6
 - Recommendation for an overview paper on bias and drift correction methods in seasonal and decadal prediction systems FU Berlin „volunteered“ to lead
 - Since then (part I): DCPD recommendations now included in the GMD DCPD paper (Doug et al.)
- Since then (part II): FU Berlin organized wiki, paper structure and tentative list of authors for the overview paper:
 - (tentative title and list of authors): „Bias adjustment for seasonal and decadal prediction (review)“, J Grieger (FU Berlin), H.Rust (FU Berlin), U.Ulbrich (FU Berlin), I. Kröner (FU Berlin), D. Smith (MetOffice), M. Liniger (MeteoSwiss), M. Vrac (IPSL), V. Guemas (IC3), N. Fuckar (IC3), L. Goddard (IRI), S. Mason (IRI), W. Müller (MPI), F. Sienz (MPI), H. Pohlmann (MPI), G. Boer (CCCMA), S. Kharin (CCCMA)
- Since then (part III): Oct2016 FU Berlin organized Bias Workshop
 - 66 participants (“all over the place”)
 - Three parts (applications for impact modelling, development in general, bias correction methods for seasonal and decadal predictions)
 - Guidelines for bias correction and further cross-linking/networking required (e.g. common proposals H2020, COST action etc. and follow-up workshops)