

Interactive comment on “Hydroclimatic Variability and Predictability: A Survey of Recent Research” by Randal D. Koster et al.

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Received and published: 29 March 2017

This is a somewhat unusual but useful format for a scientific paper, as explained by the authors: not intended as an extensive review of the dynamic field of research in hydrometeorological predictions, but an instructive topical description of some relevant aspects of the scientific field, illustrated by studies which were presented at Eric Woods honor symposium.

The body of the paper is well written and well structured, but the degree to which the selected studies are self-explanatory varies somewhat and could be improved (see detailed comments below). Some figures showed very interesting results (8, 10, 11).

Detailed comments

C1

- p2, l26: also the fact that many hydrological catchments cross national boundaries, and that cascades in impacts take place that are not limited to individual catchments is a reason to address this topic using large scale models
- p3, l28: you might mention that also developments in the observational records and techniques have contributed to this progress
- p4, l15: the reason why this modelling at hyperresolution would be beneficial could be mentioned here, it is not obvious
- p5, l16: please replace “predictions” by “projections”
- p5, l22 and Figure 2: the degree to which “local” phenomena are explained by “nearby” drivers is also a matter of definition of scales. If one is interested in precipitation variability at 50x50km resolution then it is obvious that nearby drivers have a large impact. Aggregation to the spatial scale of entire continents, however, makes also inland territories sensitive to ENSO-like drivers
- p8, l9: typo in “Berghuijs”
- p12, l28: which “Dirmeyer (2013)” is referred to here? There are 3 papers Dirmeyer 2013
- Summary: a reference to a website where the original presentations can be downloaded would be a valuable addition to this paper

Comments per figure

- Figure 3: the textual explanation is fairly thin: it is unclear what kind of model upgrade was applied, and whether the bias correction of VICET or the bias correction of the NARCCAP was the dominant factor in explaining the differences shown

C2

- Figure 6: many of the terms mentioned in the figure are not explained. Also it is unclear what is meant with “living agents”
- Figure 7: what are the units of the contours shown?
- Figure 13: the units of the lead time shown on the left is unclear.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2017-122, 2017.

C3