

## ***Interactive comment on “Estimation of hydrological drought recovery based on GRACE water storage deficit” by Alka Singh et al.***

**Alka Singh et al.**

alka228@gmail.com

Received and published: 14 May 2020

Please see the modified figures! Thanks a lot!!

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2019-590>, 2019.

C1

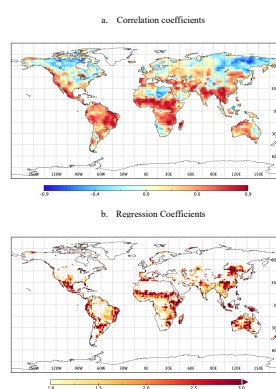


Figure 2: a) Correlation coefficients and, b) regression coefficients between cumulative detrended precipitation anomalies (cdPA) and detrended terrestrial water storage anomaly (dtWSA).

**Fig. 1.**

C2

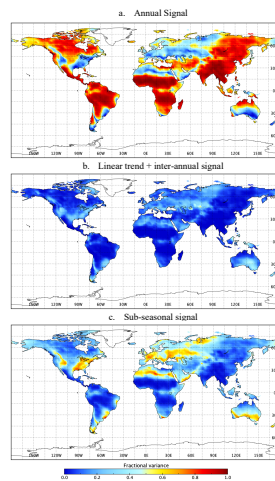


Figure 4: Fractional variance of the decomposed signal to the full signal. a. Annual Signal, b. Long-term signal, c. sub-seasonal high frequency signal

Fig. 2.

C3

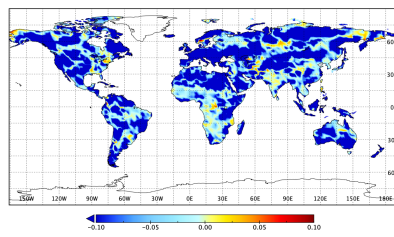


Figure 6: Nash-Sutcliffe coefficients for 2016-17 precipitation hindcasting.

Fig. 3.

C4

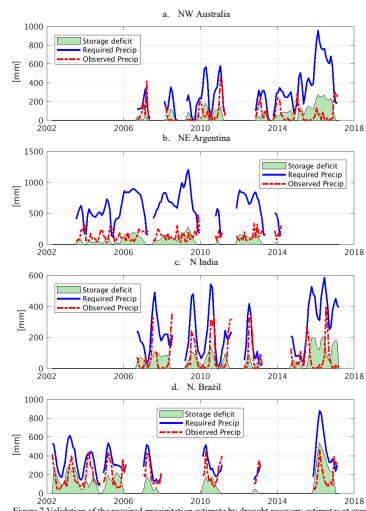


Figure 7 Validation of the required-precipitation estimate by drought recovery estimates at example locations. The different instances of drought show that drought ends (from the perspective of TWSA) whenever observed precipitation (red plot) exceeds the required-precipitation (blue plot).

Fig. 4.

C5

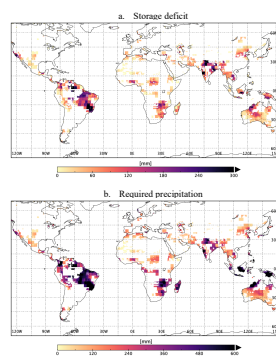


Figure 8: a) Storage deficit in an example month (January 2016). b) the amount of required-precipitation to fill the deficit.

Fig. 5.

C6