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Supplement of

Impact of downscaled rainfall biases on projected runoff changes

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Figure S1 shows the empirical cumulative distribution curves for the four parameters in GR4J model, which are based on the calibration results of the 137 unregulated catchments in Victoria. The median of the four parameters are $X1=259.3\text{mm}$, $X2=-0.8\text{ mm}$, $X3=134.3\text{mm}$ and $X4=1.25\text{ days}$ respectively. For 80% of the catchments, $X1$, $X2$, $X3$ and $X4$ are at the ranges (1.5, 1240), (-46, -0.4), (22, 379) and (0.5, 2.1) respectively. It can be seen from Figure S2 that performances of GR4J at the 137 catchments are reasonably good with NSE all above 0.5 and the median of the NSEs is around 0.69.

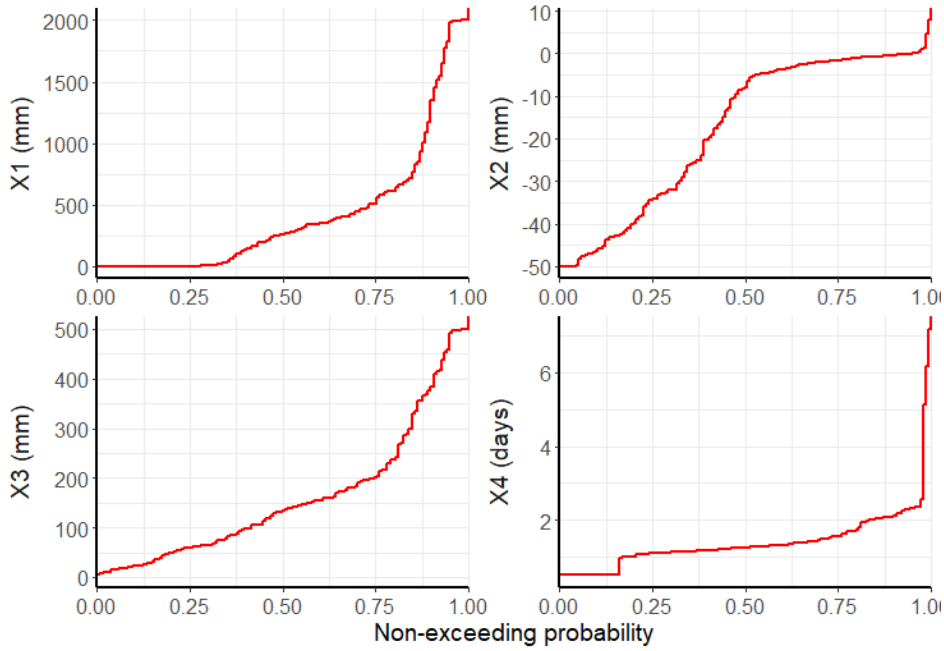


Figure S1 Empirical cumulative distribution curves of GR4J parameters based on model calibration at 137 unregulated catchments. X1 maximum capacity of the soil moisture storage (mm); X2 interbasin water exchange rate (mm); X3 maximum routing storage (mm); X4 time base of unit hydrograph (days).

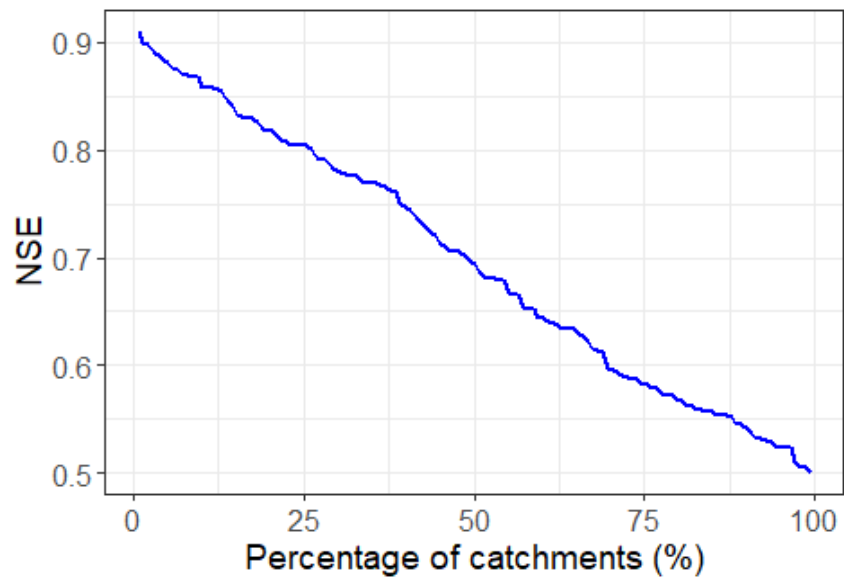


Figure S2 Performance of GR4J model calibration at 137 unregulated catchments