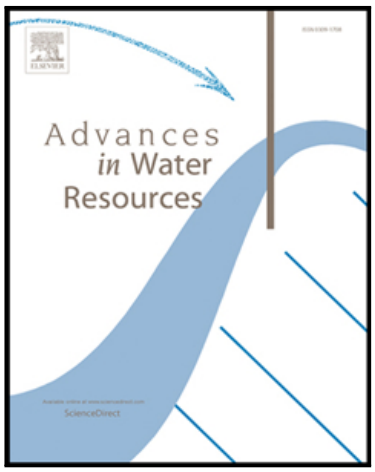

Determining Water Storage Depletion within Iran by Assimilating GRACE data into the W3RA Hydrological Model

M. Khaki, E. Forootan, M. Kuhn, J. Awange, A.I.J.M. van Dijk, M. Schumacher, M.A. Sharifi

PII: S0309-1708(17)30632-2
DOI: 10.1016/j.advwatres.2018.02.008
Reference: ADWR 3094

To appear in: *Advances in Water Resources*

Received date: 19 June 2017
Revised date: 1 February 2018
Accepted date: 7 February 2018

Please cite this article as: M. Khaki, E. Forootan, M. Kuhn, J. Awange, A.I.J.M. van Dijk, M. Schumacher, M.A. Sharifi, Determining Water Storage Depletion within Iran by Assimilating GRACE data into the W3RA Hydrological Model, *Advances in Water Resources* (2018), doi: 10.1016/j.advwatres.2018.02.008

Highlights

- We assimilate GRACE data to improve a hydrological model estimations over Iran
- Ensemble Square-Root Filter is used for data assimilation
- We estimate sub-surface water storage changes within the country
- Climate and anthropogenic impacts on the water storages are investigated
- Independent in-situ measurements are used to evaluate the results