Supplement of Hydrol. Earth Syst. Sci., 23, 711–722, 2019
https://doi.org/10.5194/hess-23-711-2019-supplement

Hydrology and Earth System Sciences
Open Access
EGU

Supplement of

Long-term groundwater recharge rates across India by in situ measurements

Soumendra N. Bhanja et al.

Correspondence to: Soumendra N. Bhanja (soumendrabhanja@gmail.com)
and Abhijit Mukherjee (amukh2@gmail.com, abhijit@gg.iitkgp.ernet.in)

Details of Tritium Injection approach:

The tritiated water has been injected in the soil layer below root zone or the zero flux plane (0.6-0.8 m below ground level; Rangarajan and Athavale, 2000; Healy, 2010). After a rainfall event, the tritium containing layer moves downward due to infiltration. The vertical displacement of the injected tritium peak is directly proportional to the rate of water infiltration within the studied time period (Rangarajan et al., 2010).

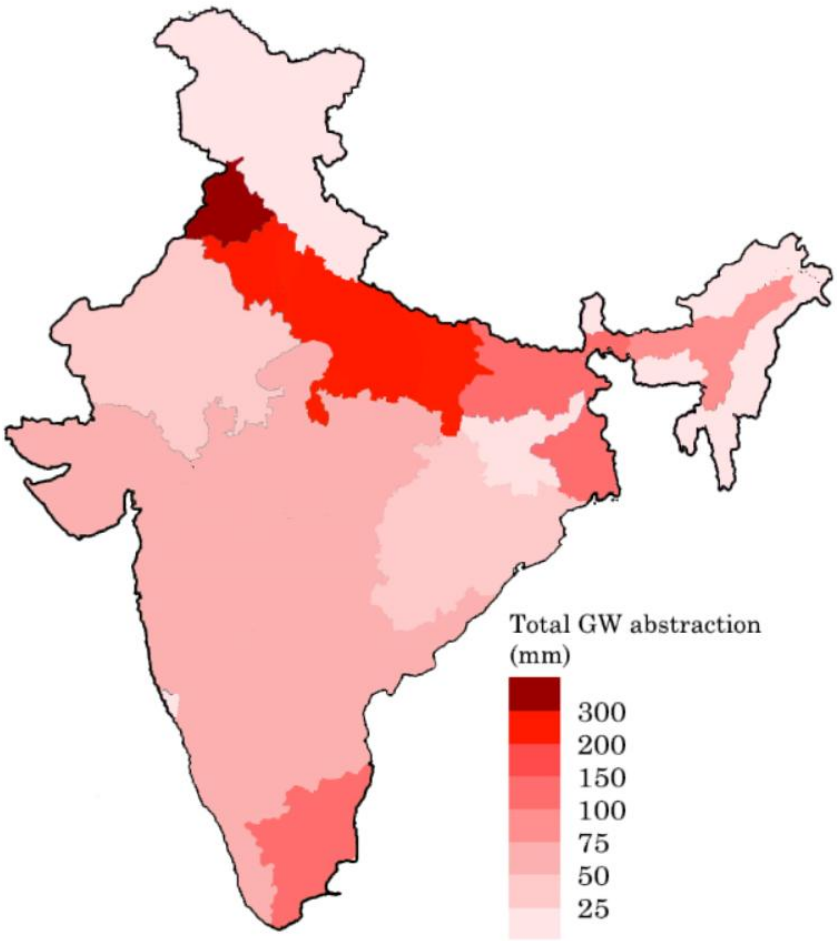

Fig. S1: Map showing state-wise total groundwater abstraction (10^{-6} km^3 per km^2 of land area) for the year 2009 (*CGWB*, 2012a)

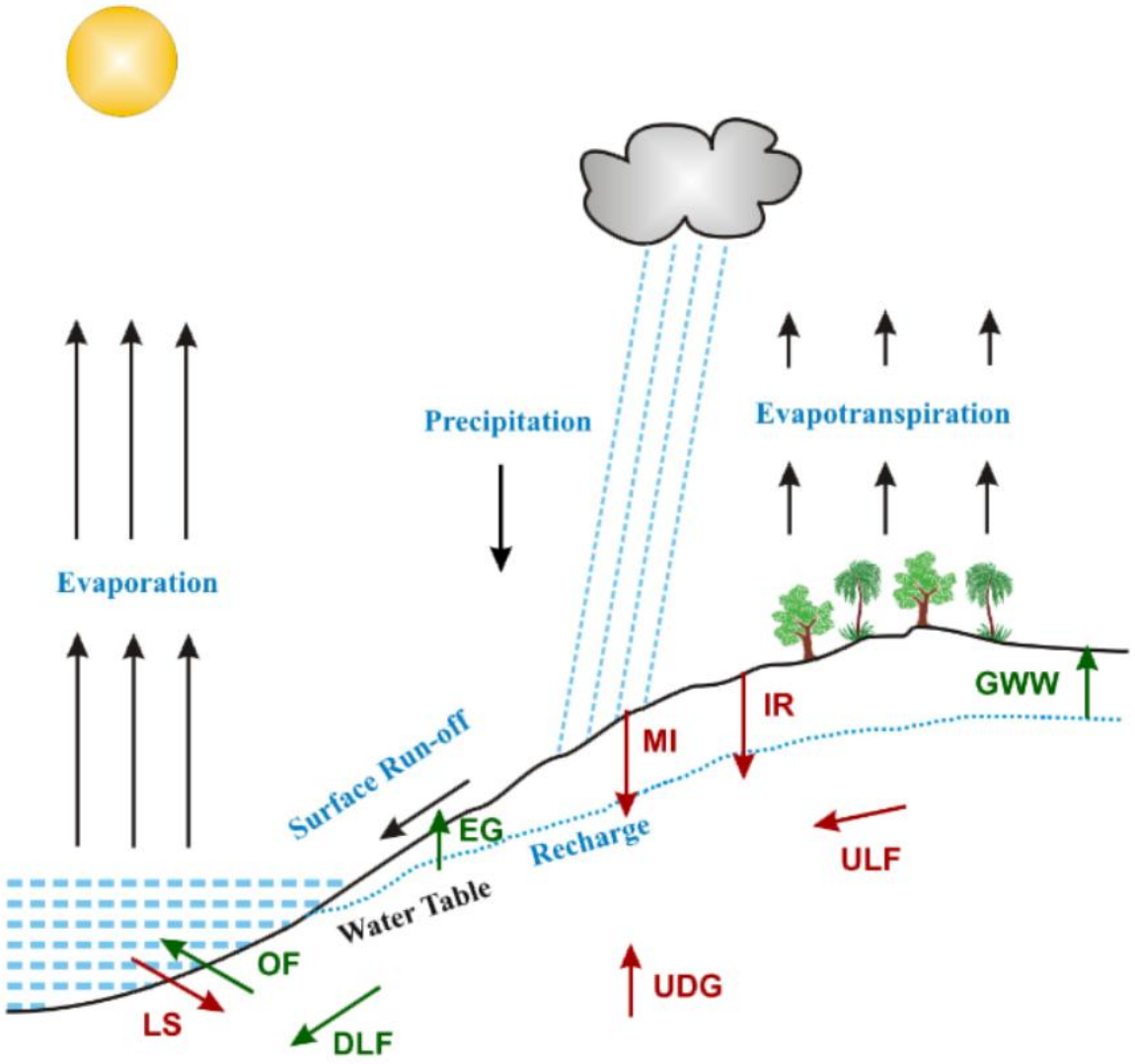

Fig. S2: Groundwater recharge processes. MI = Meteoric Inflow through precipitation; IR = Irrigational return flow; LS = Lateral seepage from surface water; ULF = Flow from upgradient location along flowpath; UDG = Upwelling from deeper groundwater systems; OF = Outflow by baseflow and discharge; GWW = Groundwater withdrawal; DLF = Flow toward down gradient along flow path; EG = Evaporation from groundwater