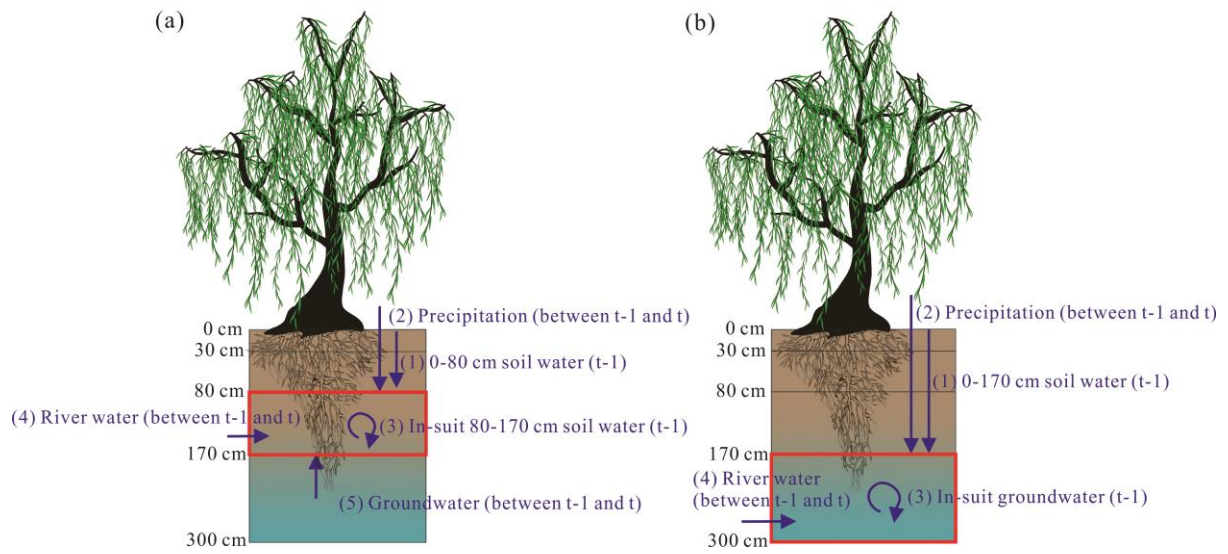


Figure S1: Seasonal variations of soil water content (SWC) in 0–30 cm, 30–80 cm, 80–170 cm, and 170–300 cm layer on twelve campaigns (a–h) during the observation period in 2019 and 2021. The letters (a, b and c) represent significant differences of SWC among the three distances away from the riverbank ($p < 0.05$). D05, D20, and D45 are the plots at distance of 5 m, 20 m, and 45 m away from the riverbank, respectively.



5 **Figure S2: Schematic diagram for potential water sources of (a) riparian deep soil water in 80–170 cm layer and (b) groundwater**