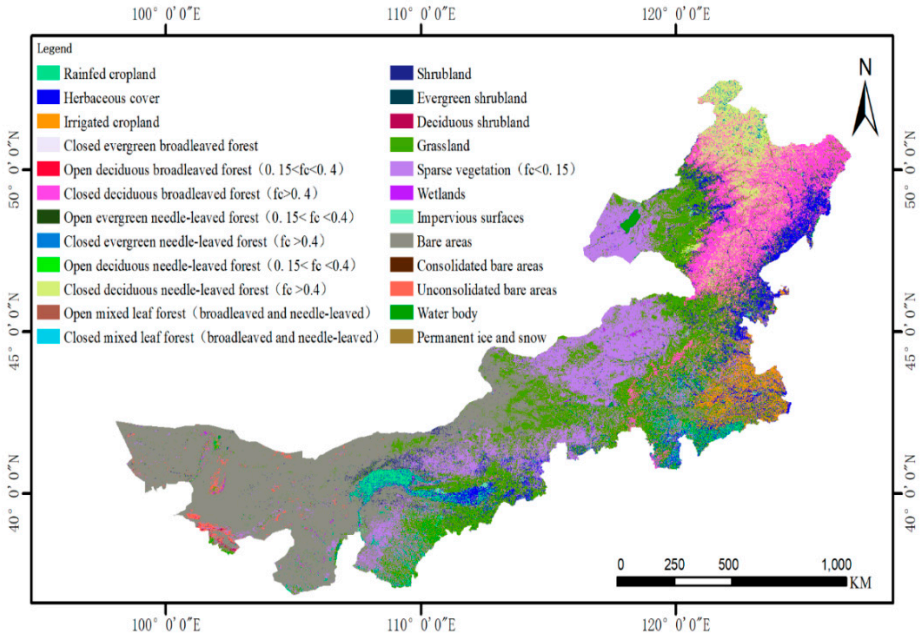



**Figure S1.** Land use distribution map with spatial resolution of 30 m in Inner Mongolia in 2017.

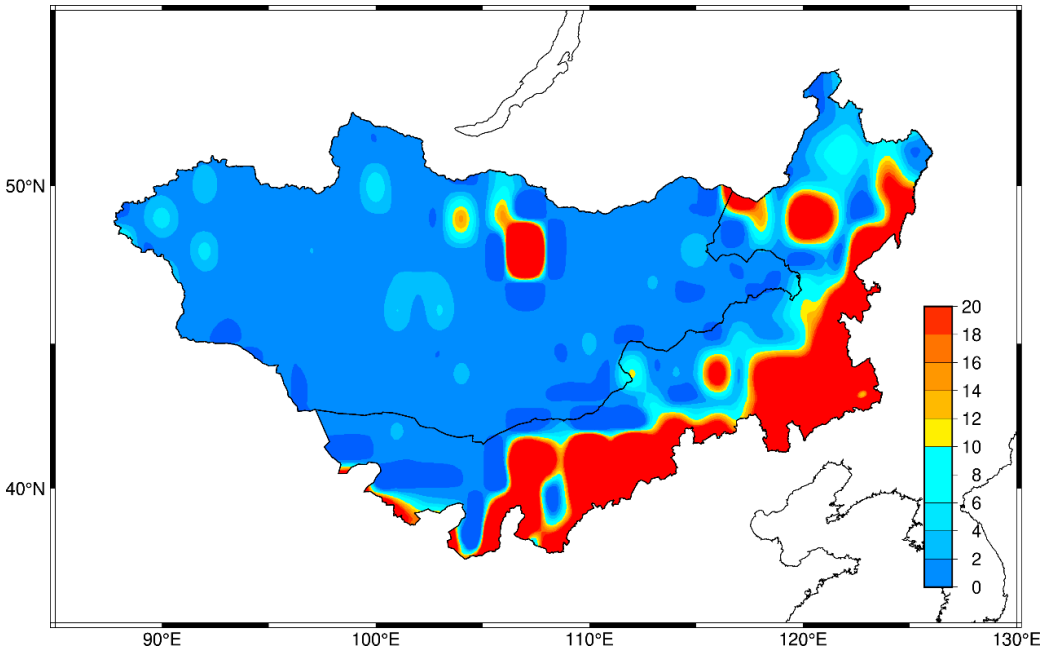



**Figure S2.** Population density estimates in Mongolian Plateau in 2020. Source: Center for International Earth Science Information Network (CIESIN), Columbia University; Food and Agricultural Organization (FAO) and Centro Internacional de Agricultura Tropical (CIAT).

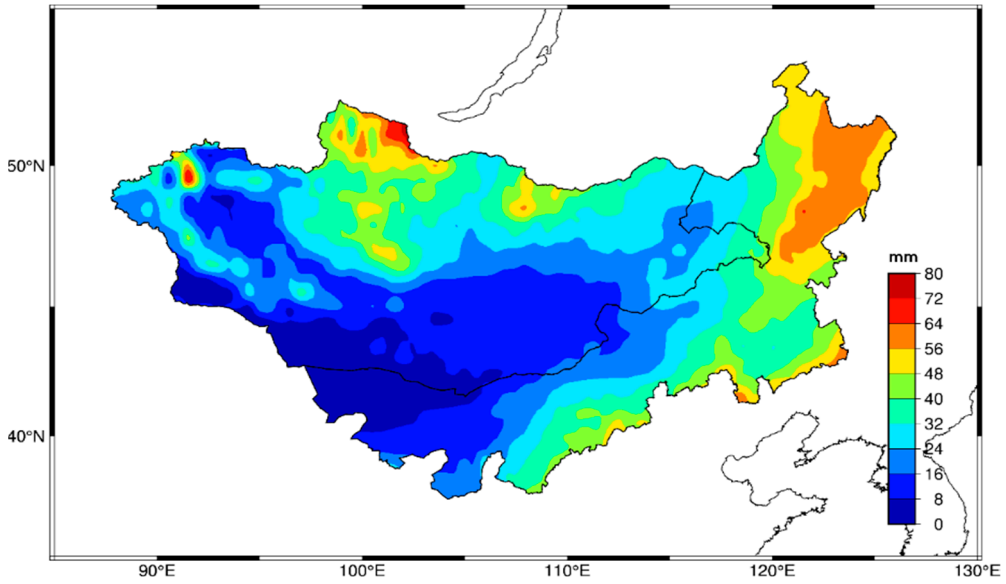



**Figure S3.** Annual amplitude of precipitation from 2002 to 2017 over the Mongolian Plateau.

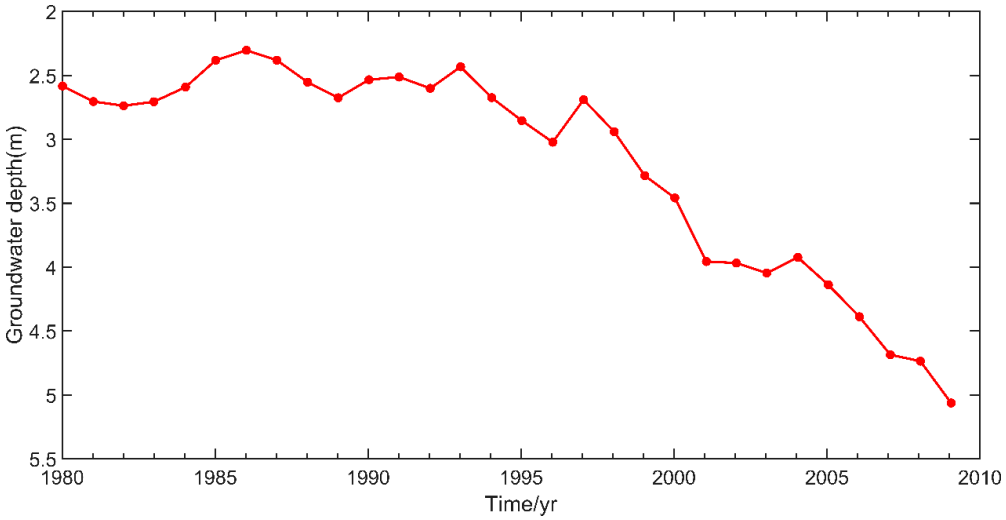



**Figure S4.** Changes in groundwater depth in Tongliao City in southeastern Inner Mongolia.

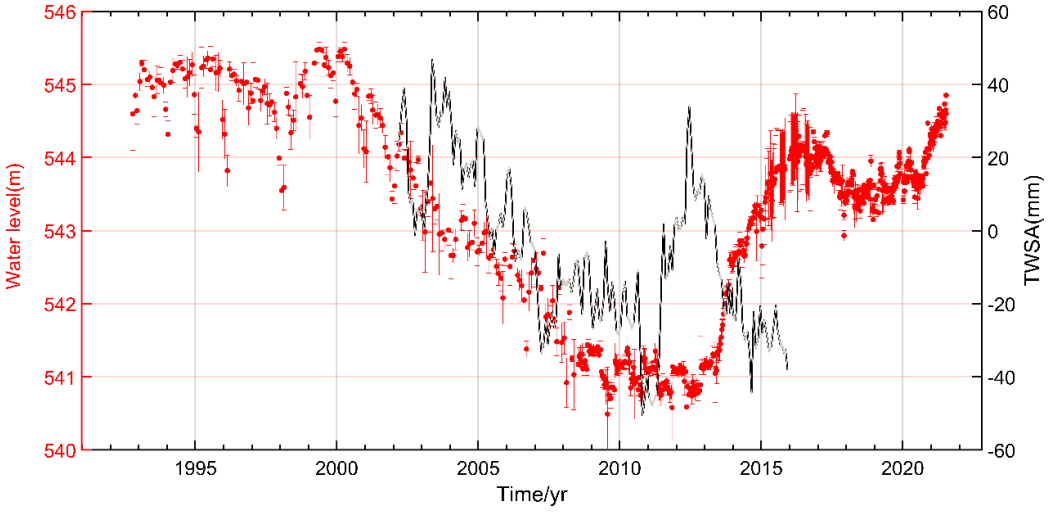



**Figure S5.** Lake level changes in the Tigris-Euphrates basin (red curves) and the change in TWSA in MP.