Table S1. Comprehensive evaluation index system of water resource utilization based on water footprint.

Standardized layer	Indicator layer	Formula	Meaning
Crop water footprint structural indicators	Blue water dependency (%)	$\frac{WF_{blue}}{WF_{blue}+WF_{green}+WF_{gray}}\times 100\%$	Degree of consumption of irrigation water resources
	Green water dependency (%)	$\frac{WF_{green}}{WF_{blue}+WF_{green}+WF_{gray}}\times 100\%$	Degree of depletion of precipitation
	Gray water dependency (%)	$\frac{WF_{gray}}{WF_{blue}+WF_{green}+WF_{gray}}\times 100\%$	Degree of consumption of graywater
Crop water footprint efficiency indicators	Crop water footprint population density（person/10^4 m^3）	$\rho = P/WF$	Ability of water footprint to support population
	Crop water footprint land density（10^8 m^3/km^2）	$\alpha = WF / A$	Land area capacity carried by the water footprint
	Crop water footprint benefits（yuan/m^3）	$\beta = GDP / WF$	Water footprint consumed of GDP
Crop water footprint ecological indicators	Blue water pressure index (%)	$\frac{WF_{blue}}{WR\times\frac{AU}{TU}}\times 100\%$	Levels of pressure on blue water resources
	Green water pressure index (%)	$\frac{WF_{green}}{10\times Ca\times P_e}\times 100\%$	Levels of pressure on green water
	Gray water pressure index (%)	$\frac{WF_{gray}}{WA_{gray}}\times 100\%$	Extent of water pollution
Crop water footprint sustainability Indicators	Crop water footprint rate of change (WFR) (%)	$WFR=\frac{WF_t-WF_0}{WF_0}\times 100\%$	Magnitude of change in water footprint
	Crop water availableness rate of change (%)	$WAR=\frac{WA_t-WA_0}{WA_0}\times 100\%$	Magnitude of change in water availability
	Crop water sustainability index (%)	$WSI=\left\|\frac{WFR}{WAR}\right\|$	Sustainable utilization of water resources

Where, WR is the total water resources of the region, billion m^3; TU is the total water use in the region, billion m^3; Constant 10 is the conversion coefficient; WF_t, WF_0 is the total water footprint of the current period and the base period, respectively; WA_t and WA_0 are the available water resources in the current and base periods, respectively.