

Supporting materials

Spatiotemporal dynamics of nitrogen transport in the Qiandao Lake Basin, a large hilly monsoon basin of southeastern China

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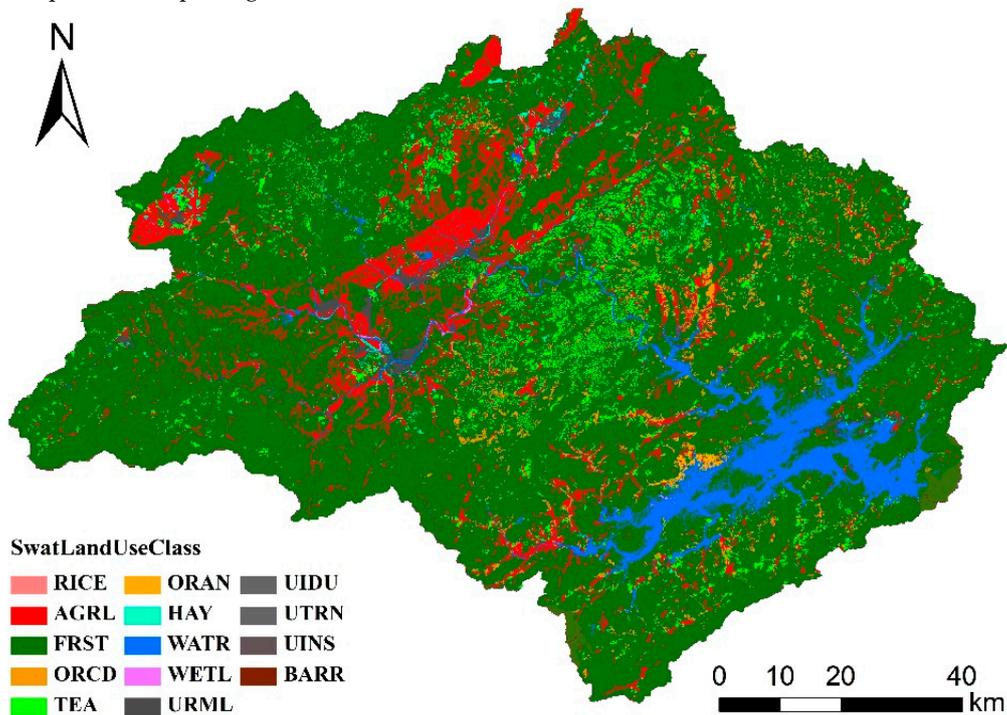


Figure S1. Land use classes used for SWAT analysis of the Qiandao Lake basin.

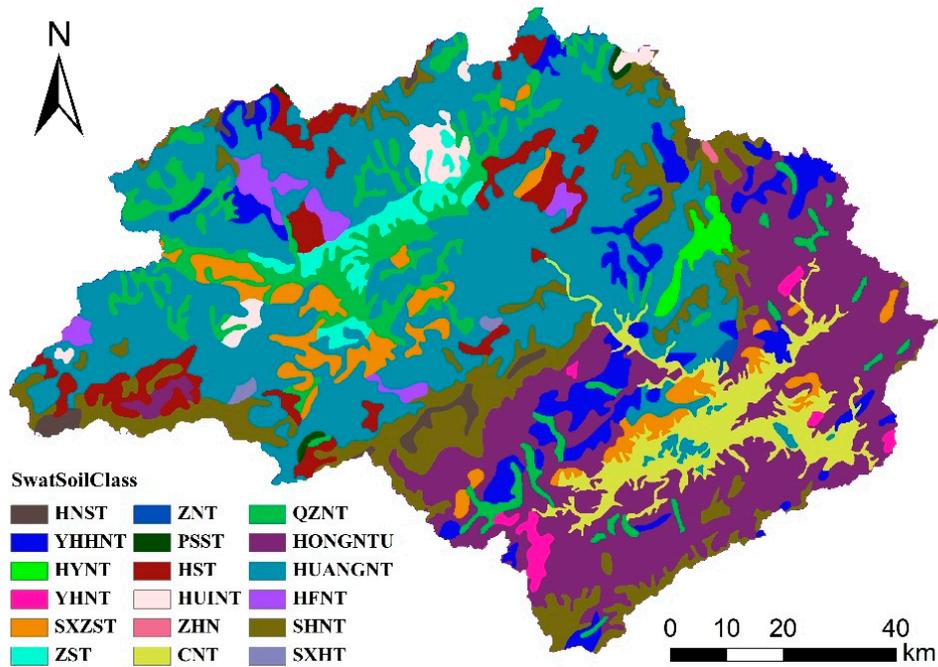


Figure S2. The soil types map of the Qiandao Lake basin that was generated for use in SWAT analysis.

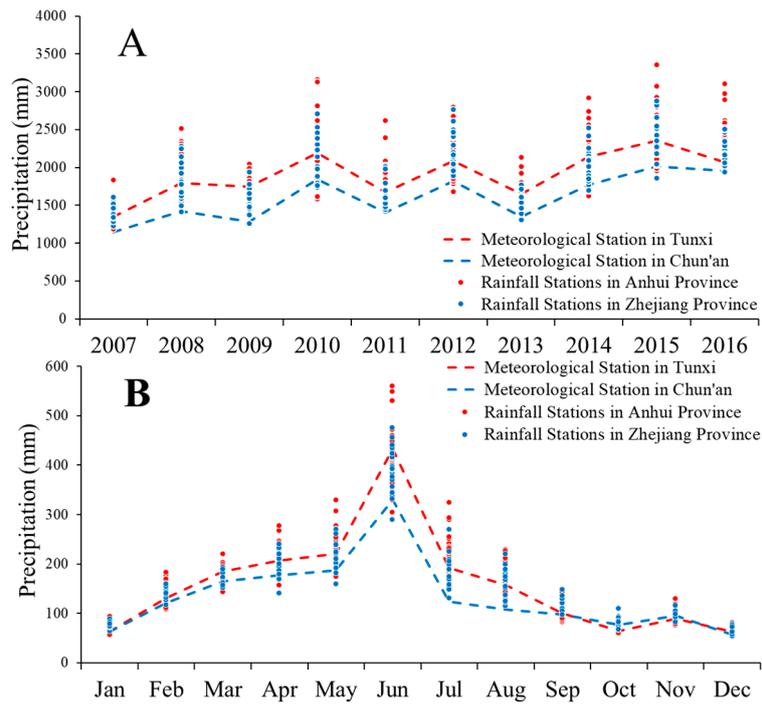


Figure S3. Temporal and spatial heterogeneity of precipitation as recorded by individual rainfall stations (dots) compared to that recorded at two meteorological stations (dashed lines). Stations in Anhui Province are in red, and those in Zhejiang Province are in blue. The locations of the stations are given in Figure 1. (A) Interannual rainfall heterogeneity. (B) Monthly rainfall heterogeneity.

Table S1. Fertilization and other agricultural management operations

Operation Number	Heat unit (HU) scheduling				Date scheduling	
	Dry land	HU	Orchard	HU	Tea land	Date

1	Growing season	0.15	Growing season	0.15	Growing season	Jan 1
2	Fertilization	0.16	Fertilization	0.16	Fertilization	Feb 25
3	Fertilization	0.34			Harvest	Apr 26
4	Harvest	1.20				

* Fertilizer application rates were 100, 457, and 532 kg/ha, respectively, for dry land, orchard, and tea.

Table S2. Main localized crop parameters of tea land

Parameters	Value	Definition
USLE_C	0.0001	Minimum value of USLE C factor for land cover/plant
BLAI	5.2	Maximum potential leaf area index for land cover/plant
LAIMX	0.15	Percent growing season corresponding to first point on the optimal leaf area development curve for land cover/plant
GSI	0.005	Maximum stomatal conductance for land cover/plant (m/s)
BIO_E	15	Biomass/energy ratio or radiation use efficiency value for land cover/plant [(kg/ha)/(MJ/m ²)]
VPDFR	4	Vapor pressure deficit corresponding to the second point on the stomatal conductance curve
WAVP	7	Rate of decline in radiation use efficiency per unit increase in vapor pressure deficit
HVSTI	0.073	Harvest index for land cover/plant [(kg/ha)/(kg/ha)]
RDMX	0.5	Maximum root depth for land cover/plant (m)
CHTMX	1.4	Maximum canopy height for land cover/plant (m)
T_OPT	21	Optimal temperature for growth of land cover/plant (°C)
T_BASE	10	Minimum temperature for growth of land cover/plant (°C)
FRGRW	0.1	Fraction of BLAI corresponding to first point on the optimal leaf area development curve for land cover/plant
FRGMAX	0.75	Fraction of maximum stomatal conductance corresponding to the second point on the stomatal conductance curve
MAT_YRS	4	Number of years required for tree species to reach full development (years)
BIO_LEAF	0.3	Fraction of the biomass accumulated each year that is converted to residue during dormancy
BMX	2.2	Maximum biomass (metric tons/ha)
CNYLD	2.46	Normal fraction of nitrogen in seed for land cover/plant (kg N/kg seed)
RSDCO_PL	0.05	Plant residue decomposition coefficient
WSYF	0	Lower limit of harvest index
ALAI_MIN	0.75	Minimum leaf area index for plant during dormant period (m ² /m ²)