Table 1. Abbreviations used in the context

Abbreviation	Description
AML	atmospheric mixed layer
ASL	atmospheric surface layer
EF	evaporation fraction
ET	evapotranspiration
IGBP	the International Geosphere-Biosphere Programme
LAI	leaf area index
LUT	look-up table
MAD	mean absolute difference
MODIS	Moderate Resolution Imaging Spectroradiometer
MOS	the Monin-Obukhov similarity theory
NCP	the North China Plain
NDVI	normalized difference vegetation index
PVC	polyvinyl chloride
P-M	Penman-Monteith
P-T	Priestley-Taylor
RS	remote sensing
RMSE	root mean square error
Sim-ReSET	the simple remote sensing evapotranspiration model
Ts	remotely sensed surface temperature
VI	remotely sensed vegetation index

Table 2. Symbols used in the context

Symbol	Unit	Definition
H	W/m^2	sensible heat flux
ET	W/m^2	latent heat flux or evapotranspiration
EF	-	evaporation fraction, 0-1
R_n	W/m^2	net radiation
G	W/m^2	soil heat flux
f_{veg}	-	vegetation cover fraction, 0-1
ρ	kg/m^3	air density
C_p	J/kg/K	heat capacity of air at constant pressure
Δ	Pa/K	the slope of the curve relating saturated vapor pressure to air temperature
γ	Pa/K	the psychrometric constant
T_s	℃	surface temperature
T_a	℃	air temperature
r_a	s/m	aerodynamic resistance for heat transfer
k	-	von Karman constant, 0.4
A	m	the height of ASL, 100
z	m	reference height, 3
z_{0m}	m	roughness length for momentum
z_{0h}	m	roughness length for heat
u	m/s	wind speed at reference height
$u*$	m/s	friction velocity
d_0	m	zero plane displacement height
L	m	Monin−Obukhov length
ψ_M	-	stratification correction function for momentum
ψ_H	-	stratification correction function for heat
$R_S^{\downarrow}$	W/m^2	downward shortwave radiation
$R_s^{\uparrow}$	W/m^2	upward shortwave radiation
$R_L^{\downarrow}$	W/m^2	downward long wave radiation
$R_L^{\uparrow}$	W/m^2	upward long wave radiation
α	-	land surface albedo
ε_a	-	air emissivity
ε_s	-	land surface emissivity
σ	W/m^2/K^4	Stephan-Boltzmann constant, 5.67×10^{-8}
Γ	-	the ratio of soil heat flux to net radiation

h	m	canopy height
h_{max}	m	The maximum height of crop or grass
LAI	-	leaf area inde
ET_d	mm/day	daily evapotranspiration
λ	J/Kg	the specific latent heat of vaporization, 2.45×10^6
t	h	the time range from the ET start to satellite overpass
N_E	h	the duration of evapotranspiration in the daytime

Table 3. Periods when bare soil is dry at Site A, contemporaneous land cover around the flux tower, and canopy heights in these periods.

Year	Day of year	Land cover around flux tower	Canopy height (*h*, m)
2006	264-325	cotton	1.27
2007	47-58, 86-102	bare soil	0
2007	168-169	cotton	0.41
2008	59-82	bare soil	0

Table 4. Results of sensitivity analyses for variables in the Sim-ReSET model.

Input Variable	Increase/decrease 10%	*Ratio (%)
A	+10%	0.43
	-10%	-0.48
h	+10%	-3.61
	-10%	3.80
T_s	+10%	-34.17
	-10%	82.48
T_a	+10%	86.10
	-10%	-34.81
T_{sd}	+10%	32.97
	-10%	-34.00
$(T_s\text{-}T_a)/(T_{sd}\text{-}T_a)$	+10%	-4.91
	-10%	10.67
R_{nd}	+10%	-20.80
	-10%	20.80
G_d	+10%	8.13
	-10%	-8.13
R_n	+10%	25.43
	-10%	-25.43
G	+10%	-5.18
	-10%	5.18

*Ratio = 100 % × (ET with one changed variable – ET without any changed variable) / ET without any changed variable