

Table 1 Variation characteristics of trend rates and sensitivity coefficients of main meteorological elements on the monthly and seasonal scales

Time scale	Meteorological trend rate					Sensitivity coefficient (%)				Sensitivity factor
	Trend <sub>T</sub>	Trend <sub>RH</sub>	Trend <sub>U</sub>	Trend <sub>Rn</sub>	Trend <sub>ET0</sub>	ST	SRH	SU	SRn	
	(°C/10a)	(%/10a)	(m/s)/10a	[(MJ/m²)/d]/10a	(mm/10a)					
Jan	0.43	0.40	−0.13	−0.01	−0.40	20.2	−63.1	49.6	20.7	RH
Feb	0.58	−1.20	−0.09	−0.06	0.82	9.2	−55.2	36.5	34.5	
Mar	0.65	−2.90	−0.07	−0.11	2.83	25.0	−47.4	28.5	44.1	
Apr	0.49	−1.50	−0.09	−0.08	1.67	45.9	−42.2	25.5	51.2	Rn
May	0.37	−1.30	−0.04	−0.21	0.91	51.3	−40.2	21.3	60.7	
Jun	0.23	−0.60	−0.01	−0.42	−2.08	50.0	−45.2	16.4	69.9	
Jul	0.31	−2.20	0.05	−0.35	0.31	46.8	−55.6	9.4	79.8	
Aug	0.40	−2.50	0.08	−0.22	1.86	45.8	−56.2	8.4	81.3	
Sept	0.44	−1.70	0.02	−0.24	0.65	46.7	−61.1	16.3	70.6	RH
Oct	0.38	−1.70	−0.02	−0.14	0.76	40.7	−75.0	28.0	55.0	
Nov	0.27	−1.50	−0.09	−0.04	0.20	19.5	−92.1	45.6	30.6	
Dec	0.39	−0.90	−0.09	−0.03	0.24	9.3	−81.4	55.2	16.6	Rn
Spring	0.50	−1.90	−0.07	−0.14	0.09	44.4	−42.9	24.6	52.5	
Summer	0.32	−1.80	0.04	−0.33	1.62	47.6	−52.8	11.5	76.9	
Autumn	0.36	−1.70	−0.03	−0.14	−0.02	40.2	−74.4	27.4	54.8	RH
Winter	0.47	−0.50	−0.10	−0.06	7.77	10.9	−64.3	47.0	24.1	
Annual mean	0.41	−1.47	−0.04	−0.16	0.65	34.2	−59.6	28.4	51.3	RH

Table 2 Contribution amounts of various meteorological elements to ET0 on the monthly and

seasonal time scales

Time scale	Contribution of meteorological elements (mm)					$\Delta ET_0$ (mm)	Main control factor
	$G(T)$	$G(RH)$	$G(U)$	$G(Rn)$	$G_{sum}$		
Jan	4.38	-1.03	-6.16	-0.22	-3.04	-2.41	U
Feb	7.38	3.36	-4.02	-1.26	5.46	4.93	T
Mar	12.05	13.92	-4.00	-3.11	18.86	16.96	RH
Apr	11.17	10.06	-7.15	-2.93	11.15	9.99	T
May	8.46	9.62	-3.51	-9.37	5.19	5.46	RH
Jun	4.27	3.87	-0.57	-19.93	-12.36	-12.45	Rn
Jul	4.55	13.56	2.76	-18.33	2.54	1.84	Rn
Aug	5.35	13.62	3.97	-11.08	11.86	11.16	RH
Sept	5.77	8.82	1.54	-10.61	5.52	3.93	Rn
Oct	4.51	7.96	-1.21	-5.38	5.89	4.57	RH
Nov	2.63	5.58	-5.24	-1.21	1.76	1.19	RH
Dec	3.91	2.74	-4.66	-0.65	1.36	1.43	U
Spring	34.08	36.51	-15.28	-14.83	40.47	32.41	RH
Summer	14.61	32.95	8.22	-49.67	6.11	0.54	Rn
Autumn	13.63	23.29	-5.63	-16.02	15.27	9.70	RH
Winter	15.52	4.53	-15.36	-3.77	0.91	3.95	T and U
seasonal mean	19.46	24.32	-7.01	-21.07	15.69	11.65	RH

Table 3 Contribution rates and annual average contribution amounts of various meteorological elements to  $ET_0$  on the yearly and multi-yearly scales

Time	Contribution rate (%)	Annual average contribution (mm)	Main control
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scale	$Con_T$	$Con_{RH}$	$Con_U$	$Con_{Rn}$	$Con$	$G(T)$	$G(RH)$	$G(U)$	$G(Rn)$	$G_{sum}$	factor
1-Y scale	8.05	9.02	-3.11	-6.94	7.02	84.94	95.17	-32.81	-73.22	74.08	RH
2-Y scale	7.96	9.03	-3.33	-6.96	6.70	83.99	95.28	-35.14	-73.44	70.69	
3-Y scale	7.91	9.00	-3.63	-6.98	6.30	83.48	94.98	-38.31	-73.66	66.49	
5-Y scale	7.87	9.13	-4.21	-7.06	5.73	83.09	96.40	-44.45	-74.54	60.50	