Table 1. The rainfall erosivity factor (*R*) in Yinjiang during the study periods

Year	Annual rainfall (mm)	The annual rainfall erosivity [MJ·mm·hm^{-2}·h^{-1}·a^{-1}]
2000	1121.03	3183.25
2005	884.23	2460.92
2013	734.39	2003.93

Table 2. Soil and water conservation measure factors in Yinjiang County

Land use types	Forest	Grassland	Cropland	Paddy field	Town	Village	Road	Waters	Unused land
p	1	1	0.4	0.15	0	0	0	0	1

Table 3. Conditions of soil erosion in Yinjiang in different periods

	Erosion rating	Erosion area(ha)	Total soil loss($\times 10^4$ t)	Average modulus ($t \cdot ha^{-1} \cdot yr^{-1}$)	area ratio(%)	Erosion ratio(%)
2000	Micro-degree	36187	8.47	2.30	28.97	1.77
	Mild	87470	126.25	126	39.99	26.44
	Moderate	40506	146.58	36.11	19.27	30.70
	Strong	15719	98.88	62.88	7.78	20.71
	Pole strong	7153	73.73	103.30	3.46	15.44
	Violent	1244	23.57	184.80	0.54	4.94
2005	Micro-degree	56529	9.74	2.35	30.27	2.66
	Mild	84898	117.30	13.92	43.90	32.00
	Moderate	34362	120.91	35.23	17.76	32.99
	Strong	10929	67.95	62.17	5.65	18.54
	Pole strong	4352	44.67	102.70	2.25	12.19
	Violent	338	5.99	177.59	0.17	1.64
2013	Micro-degree	63544	10.57	2.32	34.21	3.36
	Mild	85610	117.63	13.83	44.29	37.42
	Moderate	30801	107.54	34.97	15.92	34.21
	Strong	8010	49.73	62.11	4.14	15.82
	Pole strong	2663	26.76	100.52	1.38	8.51
	Violent	125	2.11	168.55	0.065	0.67

Table 4. The intensity variation of the soil erosion in the study area

	Grade shifting of soil erosion intensity(%)									
	0	1	2	3	4	-1	-2	-3	-4	-5
2000-2005	22.76	15.23	13.07	4.33	1.05	24.22	8.52	9.50	1.09	0.24
2005-2013	23.19	17.77	21.15	1.02	0.26	13.93	14.28	6.19	2.11	0.08
2000-2013	19.74	18.33	10.21	2.47	0.59	19.10	10.96	15.61	2.70	0.29

Note: 0 refers to the unchanged soil erosion intensity; 1 refers to the soil erosion intensity increased by one level; 2 refers to the soil erosion intensity increased by two levels; 3 refers to the soil erosion intensity increased by three levels; 4 refers to the soil erosion intensity increased by four levels; 5 refers to the soil erosion intensity increased by five levels; -1 refers to the soil erosion intensity decreased by one level; -2 refers to the soil erosion intensity decreased by two levels; -3 refers to the soil erosion intensity decreased by three levels; -4 refers to the soil erosion intensity decreased by four levels; and -5 refers to the soil erosion intensity decreased by five levels.

Table 5. Soil erosion conditions in different slope grades

Slope	Average modulus($t \cdot ha^{-1} \cdot yr^{-1}$)	Area ratio(%)	Erosion ratio(%)
＜5°	15.32	9.68	10.85
5°-8°	13.31	4.76	17.32
8°-15°	15.33	12.94	18.09
15°-25°	17.56	33.31	19.68
25°-35°	18.54	27.28	20.72
＞35°	20.15	12.03	13.33

Table 6. Annual erosion rates in different outcrop areas of rocks

	Average soil erosion rate($t \cdot ha^{-1} \cdot yr^{-1}$)						
	Non-carbonatite	carbonatite	HD	HL	MHLD	CRLI	ILCR
2000	26.67	25.48	30.30	23.77	24.34	21.78	25.25
2005	21.79	21.82	22.26	21.86	27.44	19.10	23.03
2013	18.45	19.29	18.06	19.97	23.06	17.40	20.94

Table 7. Annual erosion rate in different desertification grades

	Average soil erosion rate($t \cdot ha^{-1} \cdot yr^{-1}$)					
	None RD	Micro RD	Mild RD	Moderate RD	Severe RD	Non-karst
2000	30.46	25.40	21.48	18.54	9.71	25.93
2005	22.17	21.79	20.09	18.57	8.98	21.74
2013	18.47	19.17	18.28	16.86	11.56	18.51