Supplementary Text

In SPSS, the data were tested for "normal distribution" by Kolmogorov-Smirnova (K-S test) and Shapiro-Wilk (S-W test), and when the data size was <50, the S-W test was preferred, and in the present study, the data size was less than 50. The results of the normality test are shown in Table S1, S2 and S3.

Table S1: Tests of normality for five services in extremely degraded grassland.

	Year	Statistic	df	Sig.
forage supply	1	1	3	0.979
	2	0.908	3	0.413
	3	0.965	3	0.639
	4	0.973	3	0.687
	5	1	3	0.971
water retention	1	1	3	0.979
	2	0.908	3	0.413
	3	0.965	3	0.639
	4	0.973	3	0.687
	5	1	3	0.971
carbon storage	1	1	3	0.996
	2	0.929	3	0.483
	3	0.875	3	0.309
	4	0.984	3	0.76
	5	1	3	0.974
soil retention	1			
	2	0.974	3	0.688
	3			
permafrost stability	3	0.684	4	0.008
	4	0.95	4	0.718
	5	0.853	4	0.235
	6	0.96	4	0.779

a. Lilliefors Significance Correction

Table S2: Tests of normality for five services in revegetated grassland.

	Year	Statistic	df	Sig.
forage supply	1	0.999	3	0.942
	2	0.944	14	0.466
	3	0.927	7	0.523
	4	0.941	7	0.645
	5	0.935	4	0.625

	1			
	2	0.92	15	0.195
water retention	3	0.912	6	0.453
	4	0.967	7	0.876
	5	0.918	4	0.526
	1	0.971	3	0.671
	2	0.774	14	0.002
carbon storage	3	0.954	7	0.769
	4	0.913	7	0.418
	5	0.968	4	0.83
	1			
soil retention	2	0.903	15	0.105
	3	0.786	6	0.044
	3	0.63	4	0.001
	4	0.838	4	0.191
permafrost stability	5	0.809	4	0.119
	6	0.852	4	0.232

a. Lilliefors Significance Correction

Table S3: Tests of normality for ecosystem multifunctionality in extremely degraded grassland and revegetated grassland, respectively.

	Type	Statistic	df	Sig.
ISM	DG	0.951	14	0.571
	RG	0.931	14	0.312
Z-Score	DG	0.924	6	0.537
	RG	0.97	6	0.892
FEI	DG	0.847	14	0.021
	RG	0.637	14	0.000

a. Lilliefors Significance Correction

According to the results of Shapiro-Wilk test, a sig value greater than 0.05 means that the data obeys a normal distribution and the data can be analyzed using parametric tests. For data that do not conform to normal distribution, they are analyzed using non-parametric tests (Kruskal-Wallis test).

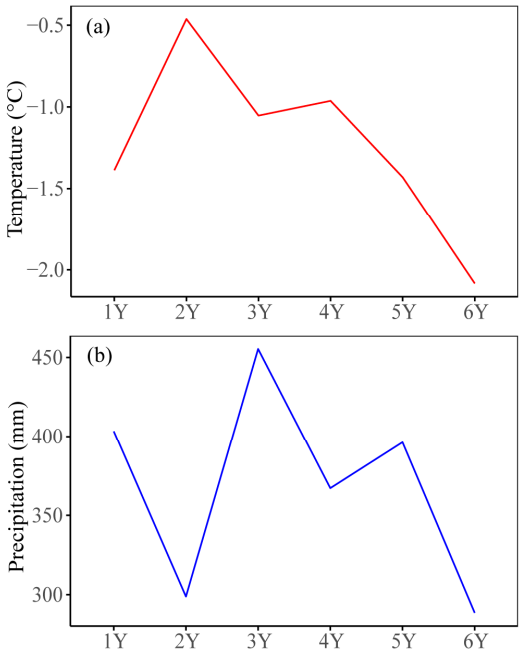


Figure S1: Changes in mean annual temperature and precipitation from the first to the sixth year of planting.