Appendix materials S1

Driving forces and ecological restoration revelation in southwest China based on the divergence characteristics of ecosystem compound use efficiency

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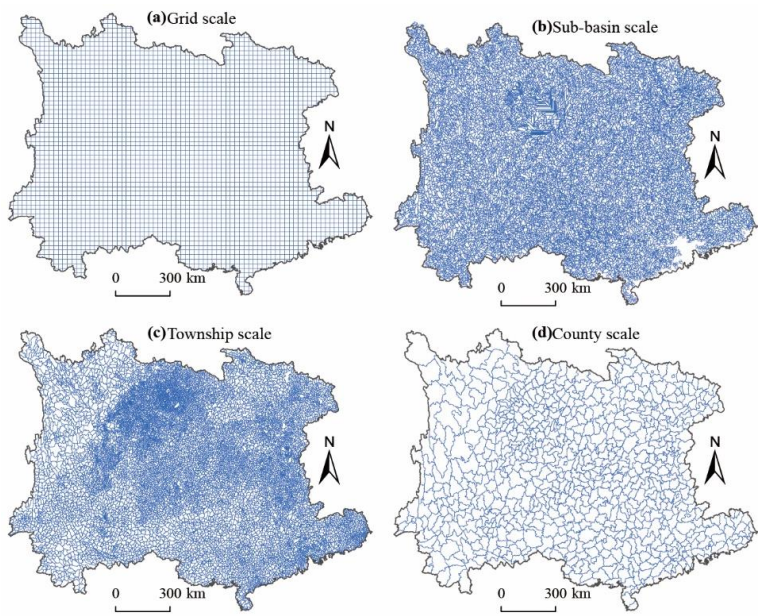


Figure S1. Four scale types in southwest China.

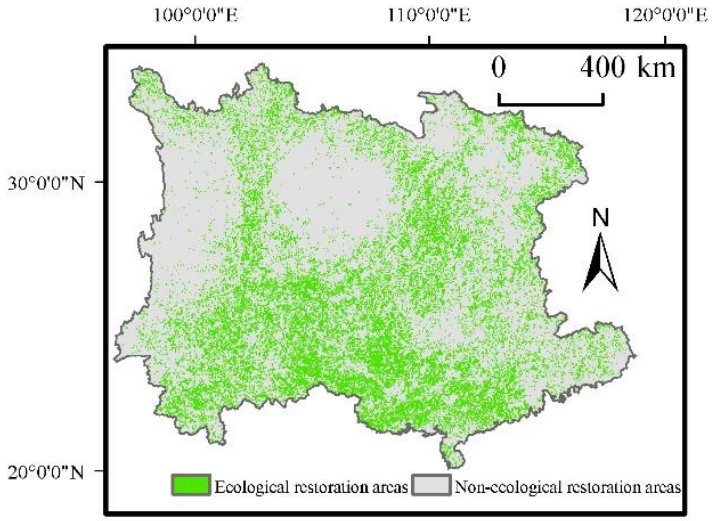


Figure S2. Zoning of ecological restoration in southwest China.

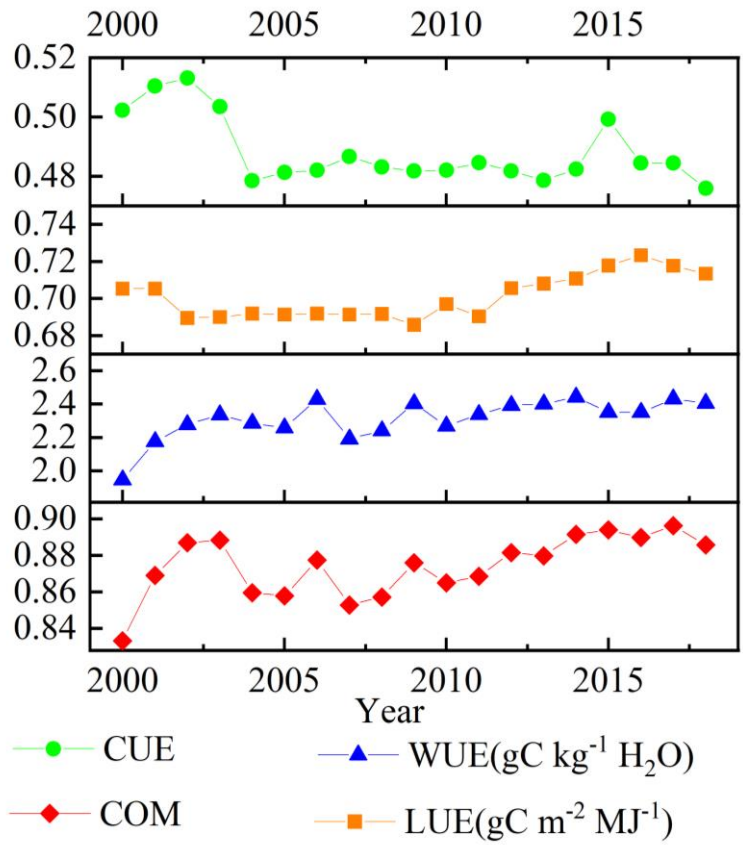


Figure S3. The annual mean of CUE, LUE, WUE, and COM from 2000-2018 in southwest China.

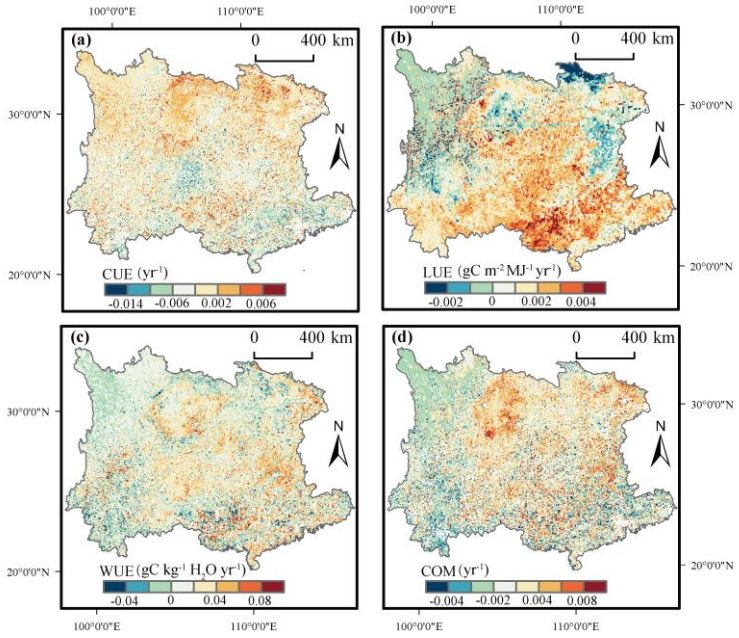


Figure S4. The inter-annual change trend of CUE, LUE, WUE, and COM from 2000-2018 in southwest China.

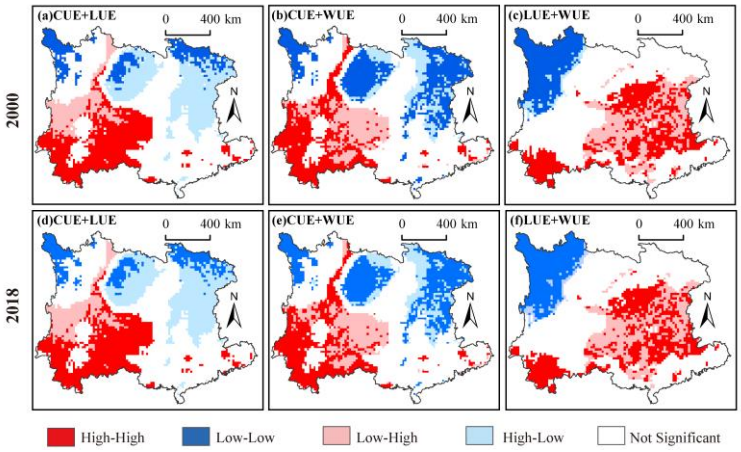


Figure S5. LISA clustering of two ecosystem use efficiencies in southwest China. (a), (d): carbon-light; (b), (e): carbon-water; (c), (f): light-water.

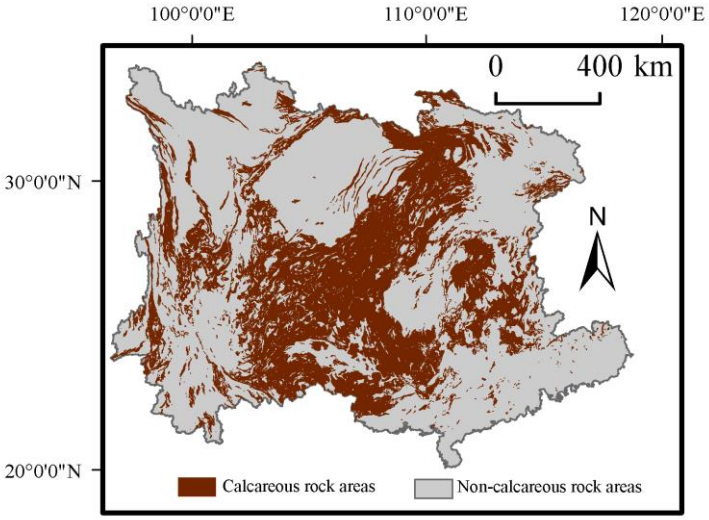


Figure S6. Spatial distribution of calcareous rock and non-calcareous rock areas in southwest China.

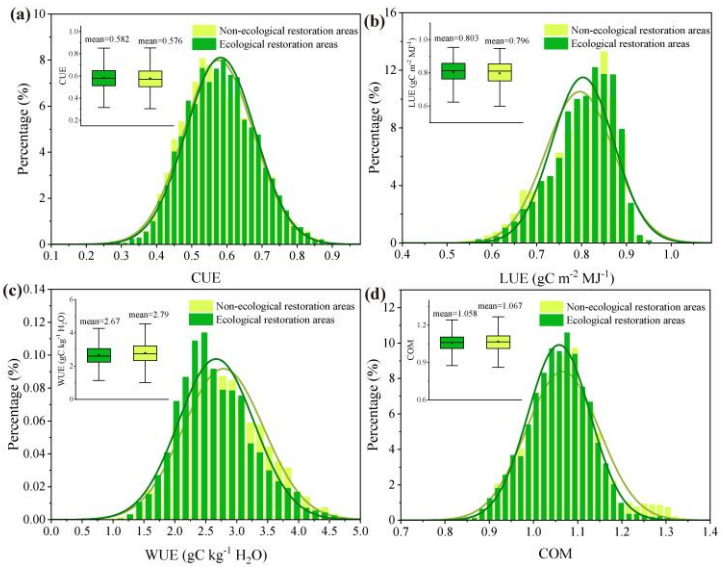


Figure S7. Multi-year average of ecosystem CUE, LUE, WUE, and COM from 2000–2018 in ecological restoration and non-ecological restoration areas.

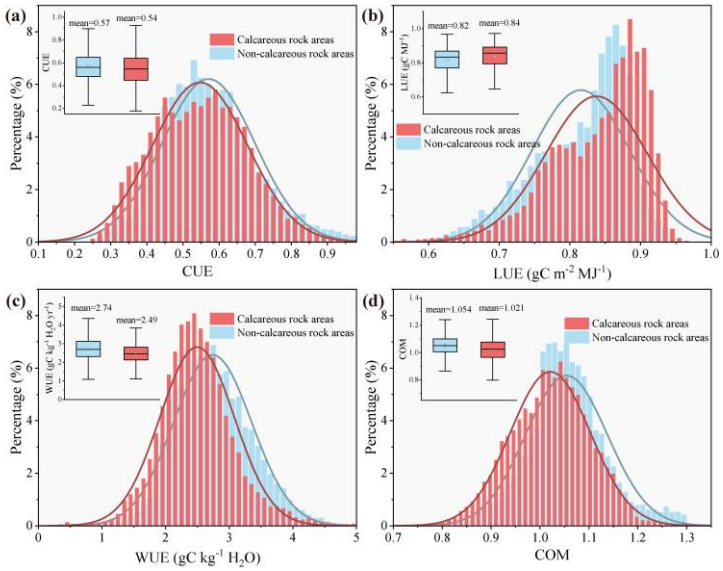


Figure S8. Multi-year average of ecosystem CUE, LUE, WUE, and COM from 2000–2018 in calcareous rock and non-calcareous rock areas.

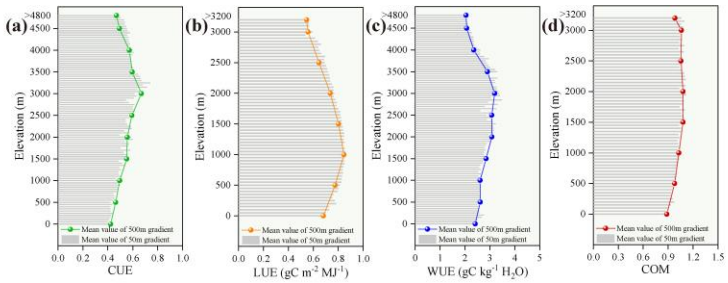


Figure S9. Multi-year average of ecosystem CUE, LUE, WUE, and COM from 2000–2018 in different elevation.

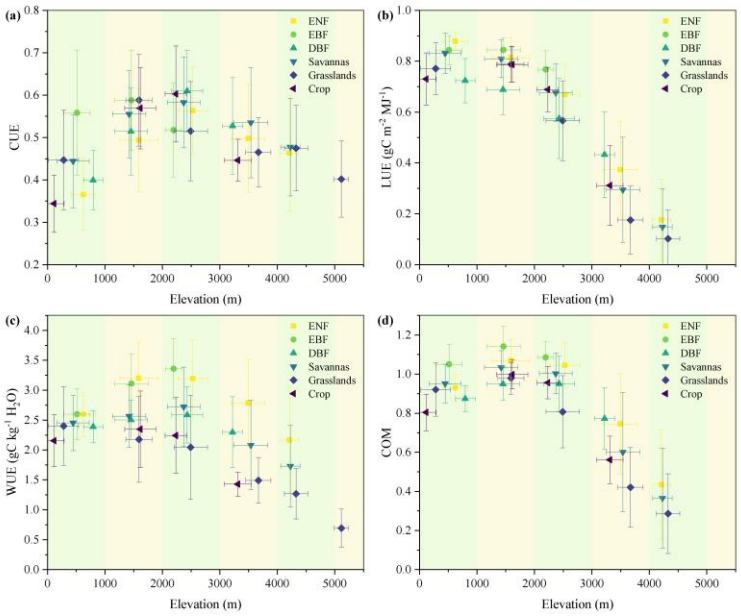


Figure S10. Distribution of multi-year average of ecosystem CUE, LUE, WUE, and COM in different vegetation types across elevation gradients.

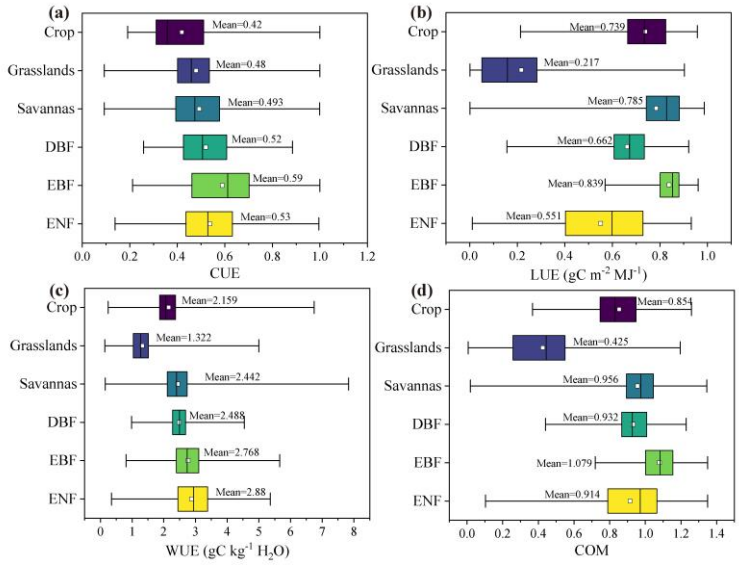


Figure S11. Multi-year average of ecosystem CUE, LUE, WUE, and COM from 2000-2018 of different vegetation types. DBF: deciduous broadleaf forest; EBF: evergreen broadleaf forest, ENF: evergreen needleleaf forest.

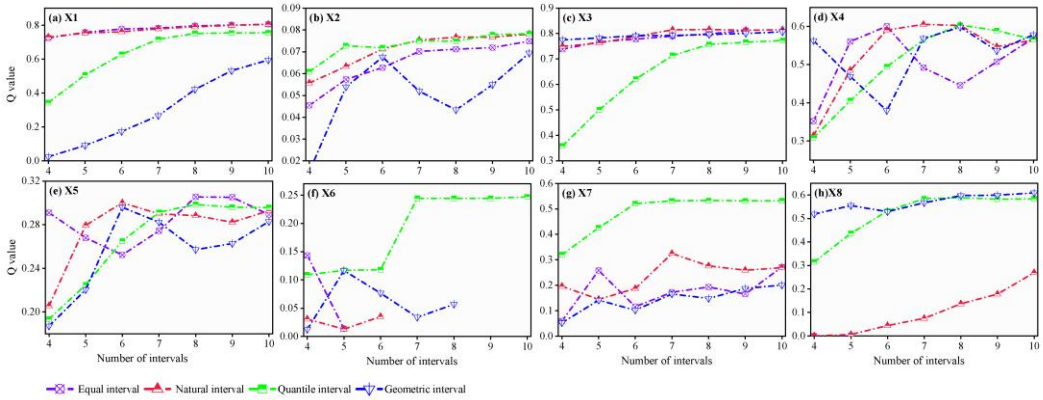


Figure S12. Change curve of *q*-values of each evaluation index under different dispersion methods and classification numbers in 2018.

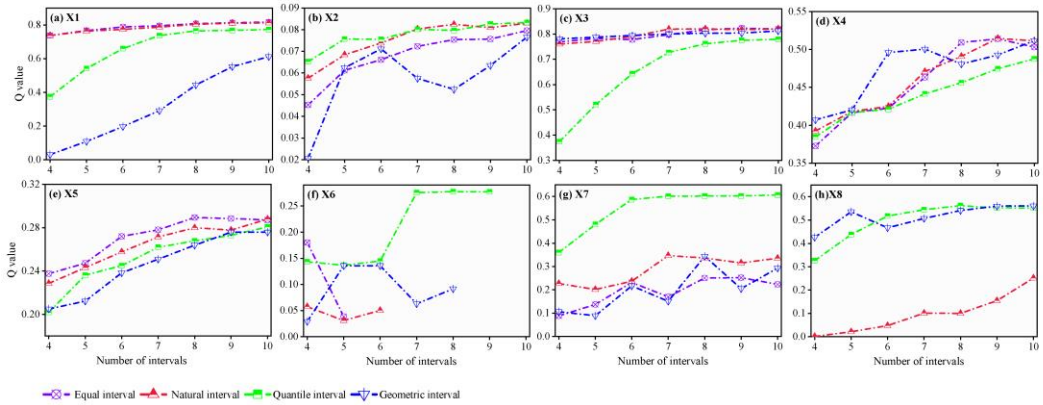


Figure S13. Change curve of *q*-values of each evaluation index under different dispersion methods and classification numbers in 2018.

Table S1. Driving factors of the COM

	Variables	Reference	Unit
Topography	Elevation	Zuo & Gao, (2022)	M
	Slope	Zuo & Gao, (2022)	°
Climate change	Temperature	Peng et al., (2019)	℃
	Precipitation	Peng et al., (2019)	mm
	Solar radiation	Zhu et al., (2023)	W/m^2
Vegetation	Vegetation type	Peng et al., (2019)	
Human disturbance	Land-use degree comprehensive index	Zhang et al., (2021)	
	Population density	Wan et al., (2023)	Person/km^2

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