Supplementary Materials:

Data name	Spatial resolution	Source	Function
CLCD (annual China Land Cover Dataset)	30m	Wuhan University (https://zenodo.org/record/5210928)	Calculation of OI, ORI, and LCI indicators, as well as river length and water area for the DW (water density index) of the EI indicator.
MOD13Q1	250m	LAADS DAAC(https://ladsweb.modaps.eosdis.nasa.gov/)	Calculation of the C (Vegetation index) of the EI indicator.
Air quality data	1km	Ministry of Ecology and Environment of the People's Republic of China (https://www.mee.gov.cn/)	Calculate the AQI indicator.
Land Surface Temperature data 《China Regional 1km Seamless Surface Temperature Dataset》	1km	National Tibetan Plateau Scientific Data Centre (http://data.tpdc.ac.cn)	Calculate the LST indicator.
Precipitation data	1km	China Meteorological Data Center (http://data.cma.cn)	Used to characterize the water resources involved in the DW (Water density index) of the EI indicator.
DEM	30m	Earth Science Data Systems (ESDS) Program (https://earthdata.nasa.gov/esds/)	Calculate the relevant slope lengths, slopes, and elevations for the EVI indicators.
Soil texture data	1km	Resource and Environment Science and Data Center (http://www.resdc.cn)	Calculate the EVI indicator.
CHEQ (China's High-resolution Eco-Environmental Quality)	500m	National Earth System Science Data Centre (http://www.geodata.cn/data/datadetails.html?datauid=190747515712302&docid=0)	Evaluate ESQ indexes.

Figure S1. Research data sources.

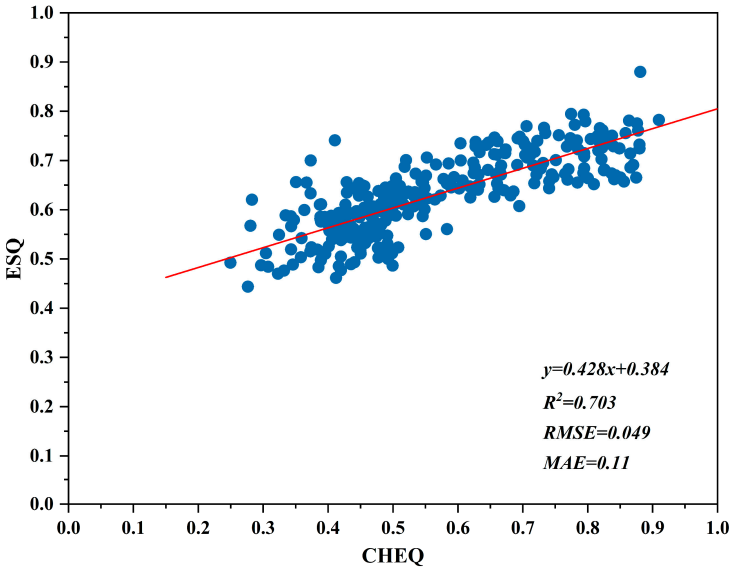


Figure S2. The regional adaptation assessment results for the ESQ using the standardized CHEQ index. ESQ: Ecological space quality; CHEQ: China's High-resolution Eco-Environmental Quality.

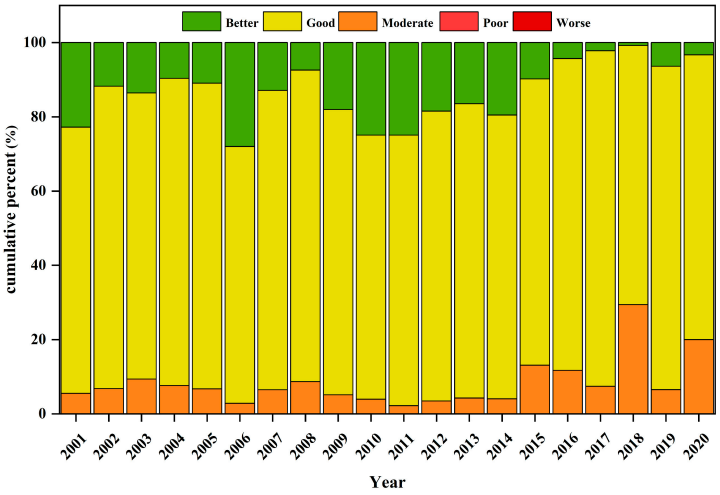


Figure S3. Area distribution of ESQ grades.

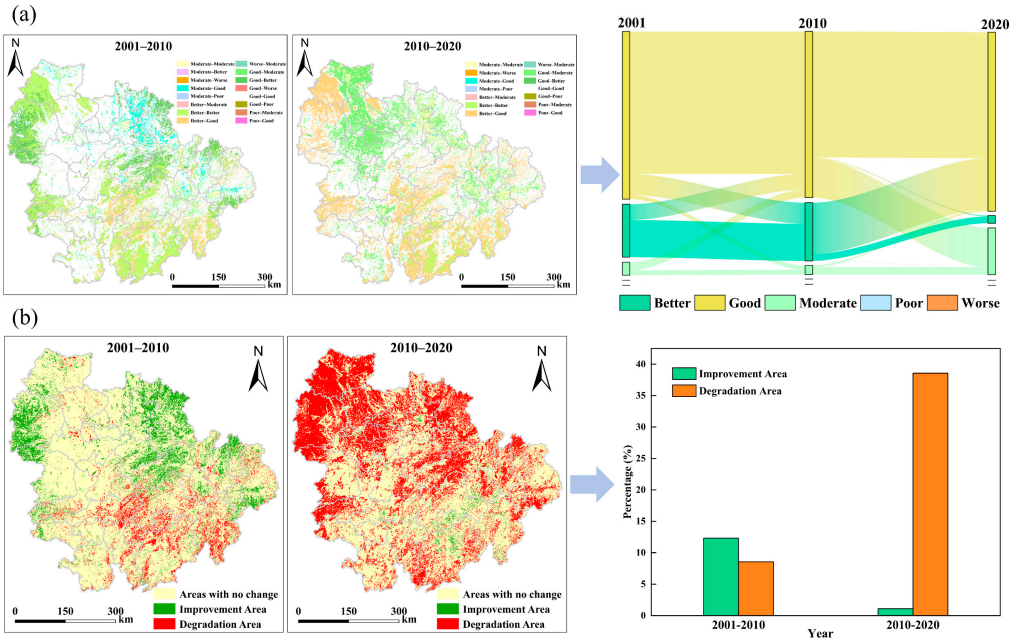


Figure S4. Spatial transfer and spatial change characteristics of the ESQ grade from 2001 to 2020.

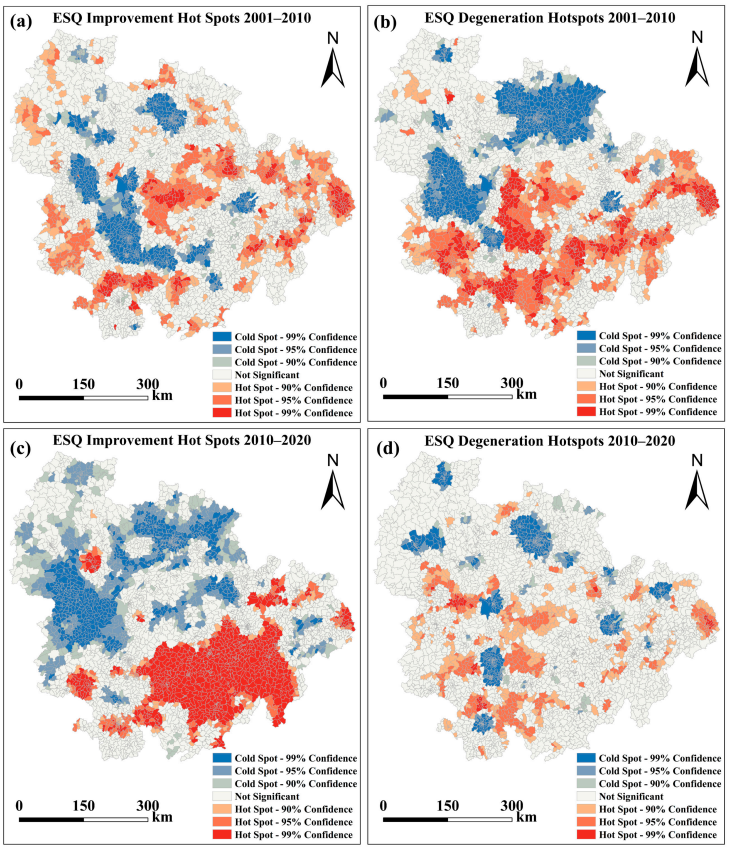


Figure S5. Hotspots analysis of spatial changes in ESQ at the town scale 2001–2020.

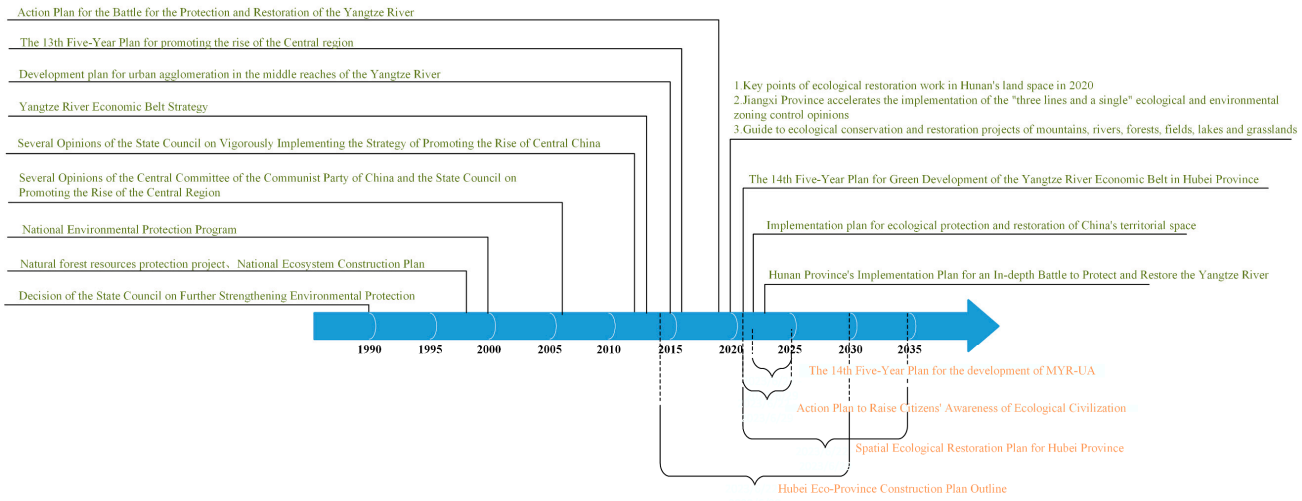


Figure S6. Relevant ecological protection policies and restoration works in the study are.