

Mapping Green Gains: How China's Cities Are Becoming Greener and Fairer

Chào Mào

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“A century-old myrtle tree stands tall and proud in an alley that appears almost deserted. At the end of the alley nestles a small lovely house, besides which tucks a mulberry tree.

The mulberry tree spreads its lust greenery wide across the vast courtyard. At noon, faint rays of sunlight would penetrate through the thick mulberry leaves, painting dots of sunny flowers on the yard, mesmerizing those passing by.”

In “Dream”; *Wild Wise Weird* [1]

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Urban greenspaces play a critical role in public health, ecological sustainability, and climate resilience. In a major study spanning two decades, Song et al. [2] harnessed satellite data to assess how urban and peri-urban green spaces have evolved in 12 Chinese cities from 2000 to 2020. By integrating high-resolution Landsat and Global LAnd Surface Satellite (GLASS) remote sensing datasets through an innovative spatiotemporal fusion method [3,4], the researchers created a 30-meter resolution vegetation dataset that maps both the extent and seasonal duration of greenspaces—known as “green days.”

Findings indicate a clear greening trend in all 12 cities studied, with an annual increase in fractional vegetation cover (FVC) ranging from 2–3% in many regions. This increase was most pronounced in peri-urban areas, where vegetation benefits from fewer constraints and more flexible land use policies. In southern coastal cities like Shenzhen, these areas enjoyed growing seasons up to 15 days longer than central urban zones. Conversely, in northern cities such as Shenyang, the urban cores sometimes showed longer green days than their outskirts, reflecting regional climatic differences.

Beyond tracking vegetation, the study examined how equitably greenspace is distributed. Using a population-weighted exposure model, the researchers found that although some disparities persist, overall equality in greenspace exposure has improved. Cities like Beijing and Shanghai demonstrated both increasing green coverage and decreasing inequality, as reflected in declining Gini coefficients. Notably, even in high-density cities in the Pearl River Delta, exposure to greenspace expanded alongside urban growth [2].

This study’s high-resolution dataset addresses a critical gap in urban planning by capturing not only the quantity of urban greenery but also its spatial accessibility and the duration of its availability to residents. It demonstrates that intelligent urban development—when guided by robust environmental data—can foster cities that are both greener and more equitable.

Through systematically monitoring and improving greenspaces, urban areas can deliver environmental benefits while simultaneously advancing social equity and enhancing quality of life. This research provides timely and actionable insights for policymakers seeking to align urban expansion with principles of sustainability and inclusiveness—reinforcing the essential link between nature and human development [5].

References

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