

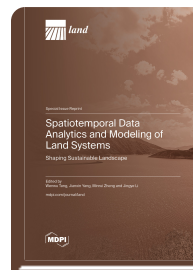
Special Issue Reprint

Spatiotemporal Data Analytics and Modeling of Land Systems

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Edited by
Wenwu Tang
Jianxin Yang
Minrui Zheng
Jingye Li

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This reprint highlights how advanced analytical techniques and modeling frameworks contribute to understanding, managing, and optimizing land-use systems under complex socio-environmental dynamics. The key themes include the analysis of urban growth boundaries, ecological quality assessment, transportation land demand forecasting, and urban suitability evaluation. Case studies from diverse contexts showcase the application of cutting-edge tools like GIS-based multi-criteria evaluation, remote sensing indices, and machine learning models. The articles provide insights into methodologies such as the Total Operating Characteristic for assessing land-use change; remote-sensing-driven ecological indices for monitoring environmental quality; and urban suitability analysis using Random Forest, Extreme Gradient Boosting, and Support Vector Machines. This reprint also features research on the spatial and temporal dynamics of ecological and urban systems. Its contributions examine the driving forces behind changes in land-use patterns, offering evidence-based recommendations for sustainable land planning and policy formation. Topics include the impact of urbanization on ecological quality, methods for optimizing land allocation in transportation systems, and strategies for enhancing resilience in environmentally sensitive areas.



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