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**Low-carbon land use optimization and management in mine-grain composited zone from the perspective of equity of resource and environment distribution**

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Land use change is an important factor in global climate change and carbon cycle. This project takes the mineral grain composited area as the research object, and takes the equity of the resource and environment distribution as the research perspective in order to carry out the research on the low carbon optimization of land use. Firstly, the process and mechanism of carbon cycle in the mineral grain composited area are revealed, using the system theory. Secondly, on the basis of the analysis of land use change in the study area, carbon emissions of land use in study area from 2000 to 2016 are explored. Carbon emission effects of land use are analyzed by using the improved Kaya equation and logarithmic-mean divisia index method (LMDI). Fairness analysis on allocation of land resources and environment is done by constructing land resource environment Gini coefficient. Then, scenario analysis method and land resource environment Gini coefficient method are applied to carry out multi scenario simulation of land use change in mineral grain compound area, and explore low-carbon optimization plan for land use in mineral grain composited area. Finally, the low carbon management system of land utilization in the mineral grain compound area is constructed from aspects of management target, management subject and management measures. The research results provide theoretical guidance for effectively reducing mining damaged land, protecting food security and optimizing land use pattern scientifically, providing a certain train of thought for promoting regional low carbon economy development.

**Biography**

Qiaowen Lin has completed her PhD from China University of Geosciences. She is doing her Postdoctoral studies at School of Public Administration, Huazhong University of Science and Technology. She has published 5 papers in reputed journals.

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