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## **EVALUATION METHOD FOR LOW-CARBON ECOLOGICAL DEVELOPMENT LEVEL OF RESOURCE-BASED CITIES BASED ON PRESSURE STARE RESPONSE (PSR) MODEL**

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### **Abstract**

To support the low-carbon ecological development of cities, this study designed a low-carbon ecological development level evaluation method based on the Pressure Stare Response (PSR) model for resource-based cities. Firstly, cluster analysis is used to integrate and classify low-carbon ecological development data of resource-based cities, reducing multidimensional data to two-dimensional or three-dimensional space, which facilitates the identification of patterns and trends in urban low-carbon ecological development; then, based on the PSR model, select 19 evaluation indicators for the low-carbon ecological development level of resource-based cities; finally, the subjective and objective weights of the comprehensive indicators are calculated, and then the low-carbon ecological development level of resource-based cities is scored from four perspectives: implementation, coordination, sustainability, and effectiveness. The development level is divided into five levels. The experiment shows that the generalization error of this method is low, the correlation between indicators is moderate, and it is suitable for practical applications.

*Key words:* evaluation of development level, indicator weight, low carbon ecological development, PSR model, resource based cities

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