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Comprehensive Evaluation of Thermal Environment and Its Countermeasures: A Case Study of Beijing

Authors : Yike Lamu, Jieyu Tang, Jialin Wu, Jianyun Huang

Abstract : With the development of economy and science and technology, the urban heat island effect becomes more and more serious. Taking Beijing city as an example, this paper divides the value of each influence index of heat island intensity and establishes a mathematical model – neural network system based on the fuzzy comprehensive evaluation index of heat island effect. After data preprocessing, the algorithm of weight of each factor affecting heat island effect is generated, and the data of sex indexes affecting heat island intensity of Shenyang City and Shanghai City, Beijing, and Hangzhou City are input, and the result is automatically output by the neural network system. It is of practical significance to show the intensity of heat island effect by visual method, which is simple, intuitive and can be dynamically monitored.

Keywords : heat island effect, neural network, comprehensive evaluation, visualization
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