研究报告

基于大气辐射校正的广州市植被覆盖度遥感估算

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摘要   植被覆盖度是描述生态系统的基本参数，也是进行生态系统健康与安全评价的重要生态参数. 基于1990、1995、2000和2005年4个时相的TM遥感数据源，以广州市为研究区域，运用减少大气辐射影响的植被指数计算模型，通过非监督分类及图像空间模型运算，修正了大气辐射校正参数，建立了植被覆盖度与校正植被指数的模型，估算了不同时期内广州市的植被覆盖度. 结果显示，广州市植被覆盖度在1990—2000年的10年内持续下降，从2000年开始呈上升趋势，符合广州市的经济发展与环境建设实际. 所建立的模型适合于区域植被覆盖度动态变化研究，且在植被覆盖度的动态变化特征研究方面有较大优势，其结果适于进行城市生态环境质量与动态评价.

关键词   植被覆盖度   遥感影像   植被归一化指数   广州

分类号

Remote sensing estimation of vegetation coverage in Guangzhou based on the correction of atmospheric radiation

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Abstract

 Vegetation coverage is a basic parameter in describing landscape ecosystem, and an important index in assessing ecosystem health and security. Based on the four TM images in 1990, 1995, 2000 and 2005, and by using the correction model to deduct atmospheric radiation effect and the spatial operating model for TM image under unsupervised classification, the relationship model between vegetation coverage and normalized vegetation index was established, and the vegetation coverage in different phases in Guangzhou was calculated. The results showed that the vegetation coverage in Guangzhou decreased continuously from 1990 to 2000 but began to increase thereafter, which accorded with the economic development and environmental construction of the city. The model established in this paper could simulate well the dynamics of regional vegetation cover, and have the advantage in describing the dynamics of vegetation coverage more accurately, being available to the assessment of urban eco-environmental quality and its dynamic characters.

Key words   vegetation coverage   remote sensing image   *NDVI*   Guangzhou

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