

## GIS技术在生态环境状况评价方面的应用

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### 摘要:

生态环境是人类赖以生存和发展的基础, 对生态环境状况进行科学的、准确的、行之有效的评价是亟待解决的生态问题之一。研究选取生物丰度指数、植被覆盖指数、水网密度指数、土地退化指数、环境质量指数, 运用层次分析法, 以行政区域为单元, 计算生态环境质量指数, 运用GIS的地统计分析空间插值工具, 得到栅格图层, 进行栅格计算, 得到具体每一点的生态环境质量指数, 统计计算各行政单元内各级别所占的比例。研究表明: 运用GIS的插值功能及其栅格统计, 进行生态环境状况评价, 可弥补以行政单位为评价单元, 以点数据、平均数据代替整个区域的整体特性的评价方法的缺陷, 该评价方法突出评价单元内的差异性, 使评价结果的空间定位更加精确。

关键词: 生态环境; GIS; 空间插值; 层次分析法; 栅格计算

## Application of GIS technology in the evaluation of environmental condition

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### Abstract:

Ecological environment is a basis for the living and developing of human being. One of the urgent ecological problems is how to assess the ecological status of the environment in scientific, accurate and effective ways. The indexes of biological abundance, vegetation cover, hydrology, land degradation and environmental quality were selected to calculate the ecological environment quality index by AHP with the administrative region as a unit. The statistical analysis of spatial interpolation tools in GIS was used to get the grid layer, and then the grid calculation was made to get the ecological environmental quality index of each grid, finally to calculate the proportion of the administrative unit at all levels. The result showed that it could resolve the defects of using administrative unit as evaluation unit. This evaluation method focused on the differences among each unit and made the spatial location of evaluation result more precise.

Keywords: ecological environment GIS spatial interpolation AHP grid calculation

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