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基于**GIS**与耕地质量组合评价模型划定基本农田整备区

Consolidation area delimitation for supplemental prime farmland based on GIS and combined quality assessment model

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中文摘要：

　　针对划定基本农田有质量、数量和空间的多重要求，该文从耕地的自然条件、质量条件、灌溉条件、区位条件、规划用途等5个层面选取16个指标建立了一般农田入选基本农田整备区的指标体系，并运用GIS技术提取各评价指标的空间属性数据；然后根据耕地质量模糊优选模型和属性层次模型2个模型评价结果的平均值对候选耕地进行质量和区位优劣排序；最后根据排序结果，通过GIS空间分析功能，以重庆市秀山县梅江镇为例，划定基本农田整备区的空间分布范围。组合评价模型可形成多角度评价结果的综合平衡，提高评价结果的科学性。

英文摘要：

　　The Consolidation Area for Supplemental Prime Farmland (CASPF) is a new concept in the current round of revising general land use planning, which is the concentrated cultivated land area where ordinary farmland can be adjusted to and can supplement basic farmland during the implementation of land use planning. Delimitation of the CASPF is very important for achieving the goal of protecting prime farmland. According to the features of CASPF, this paper established a comprehensive evaluation indicator system for choosing ordinary farmland as CASPF, which consists of 16 indicators. Considering the multiple requirements of quality, quantity and space distribution for basic farmland delimitation as CASPF, there are two steps in the ordinary farmland screening procedure, namely sorting and selecting the farmland plots by their quality order and locating the selected plots. In this study, according to the characteristics of these two steps, GIS technology was used to extract the quality data of farmland plots, and Fuzzy Optimization Model and Hierarchical Attribute Model were used in the screening of candidate plots for prime farmland. The average values of plots evaluation results calculated with the two models were taken as the basis for quality ordering. Finally, taking Meijiang town, Xiushan county, Chongqing city as examples, the specific locations of CASPF were determined with the help of GIS spatial analysis function. This combined assessment model can avoid the limitations of single evaluation method and obtain more scientific results.

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