

Mapping the Regional Land-types System Using Multiple Data

Yu Gao¹, Penghui Jiang¹, and Manchun Li¹

¹Nanjing University

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Abstract

Establishing a procedure which divides geographic environment into different spatial units with certain geographic homogeneity is the prerequisite of resource management, but it is a challenging task owing to the complexity of geographic environment. Land-type research which aims to map patterns and interactions of geographic components (e.g., climate type, landform, soil type, and land cover etc.) lays foundation to division of geographic environment. Although national standard of land-type in China provided a framework for land survey, it weakened the importance of human activity. Combining multi-source data and geospatial analysis methods, this study identified agricultural land quality and urban functional areas as proxies for land-use intensities and further proposed a 1:100,000 hierarchical classification system that integrated landform type, soil type, land-use type, and land-use intensity. Factors in the classification system were represented by parameter layers. Using this classification system, Changzhou City land was classified into 3 classes, 37 subclasses, and 137 land units. The land-type map and analyses of human-land relationship could support current land-use planning in China which needs a comprehensively knowledge of geographic environment rather than just land-cover/land-use.

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