利用GIS与TM资料集成技术估算龙游县早稻面积(英文)

Integration of GIS and TM Data to Extract Early Rice Area in Longyou County

投稿时间：2000-10-27

作者	单位
黄敬峰	浙江大学农业遥感与信息技术应用研究所，杭州 310029
Ahmad Yaghi	浙江大学农业遥感与信息技术应用研究所，杭州 310029
王人潮	浙江大学农业遥感与信息技术应用研究所，杭州 310029

摘要点击次数：7

全文下载次数：11

中文摘要：

　　提出利用GIS 与TM资料集成技术估算中国南方丘陵山地早稻种植面积的方法。该方法首先利用ARC/INFO对土地利用现状图进行数字化，建立拓朴关系后将其转化为栅格，然后进行投影变换，使土地利用现状图、行政图、TM数据具有相同的坐标，最后利用土地现状图，提取水田分布图，对水田分布图进行分类估算早稻种植面积。不同方法比较结果表明：非监督分类法不能用于提取丘陵山区的水稻种植面积；只用TM资料估算龙游县早稻面积，与统计数据相比，平行六面体分类法、最大似然分类法精度分别达到82.83%和59.95%；而用GIS 与TM资料集成技术对水田分布图进行分类估算早稻面积，平行六面体分类法、最大似然分类法的估算精度分别达到93.98%和60.65%，所以利用平行六面体分类法对南方丘陵山地早稻种植面积估算是可行的。

英文摘要：

　　This paper introduces the methodology of integrating GIS and TM data for estimating the early rice planted area. It overcomes static disadvantage of GIS and enhance the classification results of TM image. Land use map and town boundary map were digitized then transferred to raster format and opened in ENVI image analysis system. TM image, land use map and town boundaries map were registered to the same projection. Utilizing of mask utility, the study area, every land using type and every town TM images were established. Supervised and unsupervised image classification were applied to the study area TM image and to the paddy field TM image. And the early rice areas were calculated by each method. Using the proposed methodology improved the quantitative accuracy of early rice area estimated up to 93.98%, whereas it was 82.83% when image classification was used only. The extracted information from the classification is belonging to the early rice and not to any other vegetation. Since the GIS database is available, the method is easily applicable to any new RS images.

查看全文　　　　　　　关闭　　　　下载PDF阅读器