

前植物生产层

基于EVI植被指数的大尺度草地多源信息综合分类研究

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摘要:

在全国范围内采用MODIS EVI植被指数结合多源环境因子数据的方法实现对主要草地类型的划分。在借鉴第一次草地调查分类方案的基础上,提出了新的草地分类方案,将我国的天然草地划分为9类。根据气候带分布状况划分我国的四大草地资源分区,在分区内进行草地分类。在分类中通过量化分析各草地类型增强型植被指数和高程、降水、积温和湿润度等环境因子特征,建立草地类型提取规则,采用基于知识的方法进行分类,最后将各分区分类结果合并形成全国草地分类结果。采用混淆矩阵的方法对分类结果进行精度检验,总体精度达到96.19%,分类效果比较好,体现了我国主要草地类型的基本分布状况。

关键词: EVI; 草地信息; 提取规则; 大尺度草地分类

An integrated classification of grassland in large scale based on MODIS EVI and multi source data

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Abstract:

The main grassland types in China were classified by using the integrating method with MODIS EVI and multi source data of environmental factors in this study. Based on the classification system of the first national grassland survey, this study established a new grassland classification system, in which the natural grassland types in China were classified into 9 types. The distribution areas of grassland in China were divided into four grassland regions by climatic distribution zones, and the grassland types were identified for each grassland region. The extracting rules of grassland types was proposed by quantified characteristics of each grassland via EVI, DEM, precipitation, accumulated temperature, and moisture index data. The grassland types in each grassland region were classified by the extracting rules, and then the grassland classification system for China was constructed by merging each grassland region. The precision of classification was tested by confusion matrix and was 96.19%.The grassland classification showed the actual distribution of the main grassland types in China.

Keywords: EVI; grassland information; rule of information extraction; large scale grassland classification

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