点击复制

# 基于证据权重法的呼伦贝尔地区人为草原火险空间

工具/TOOLS
引用本文的文章/References
下载 PDF/Download PDF(1100KB)
立即打印本文/Print Now
推荐给朋友/Recommend

| | |
|---|---|
| Title: | Spatial prediction of human-caused grassland fire risk in Hulunbeier region based on weights of evidence |

作者： 张继权； 沈玲玲； 佟志军； 刘兴朋； 崔亮
东北师范大学 城市与环境科学学院,自然灾害研究所,吉林 长春 130024

Author(s): ZHANG Jiquan; SHEN Lingling; TONG Zhijun; LIU Xingpeng; CUI Liang
Natural Disaster Research Institute, College of Urban and Environmental Sciences, Northeast Normal University, Changchun 130024, China

关键词： 证据权重法; GIS; 人类活动; 呼伦贝尔; 草原火险

Keywords: weights of evidence; GIS; human activity; Hulunbeier; grassland fire ignition risk

分类号： S429

DOI： -

文献标识码： -

摘要： 应用证据权重法结合GIS空间分析,研究了呼伦贝尔地区人为草原火险。利用证据权重法定量化地分析了与人类活动密切相关的5个因子(乡村人口密度、载畜密度、居民点分布、城镇分布、公路网)与草原火点空间分布的关系,并建立了呼伦贝尔草原火险预测模型,据此在ARCVIEW的WofE扩展模块下生成一幅草原火险预测专题图,并将研究区划分为高、中、低三类风险区。研究表明:(1)呼伦贝尔草原火灾火点的空间分布与人类活动关系密切,尤其是乡村人口密度、公路网与居民点分布这三个因子,权重分别为0.5191,0.1945,0.2864;(2)证据权重法可以客观定量地表现出草原火险与人类活动的关系,因而可为草原火灾风险管理提供决策支持。

Abstract: Human-caused grassland fire ignition risk in Hulunbeier was explored by the weights of evidence method and GIS spatial analysis. Five factors related to human activities were selected: rural population density, livetock density, residential area distribution, city and town distribution, and road net. The relationships between each factor and the spatial distribution of grassland fire points were analyzed quantitatively using the weights of evidence, and a prediction model of human-caused grassland fire ignition risk in Hulunbeier was established. Based on the model, a prediction map was generated with the help of the WofE extension in ARCVIEW, which divided the research area into high, medium and low risk areas. Results indicated that Hulunbeier grassland fire ignition risk is closely related to human activities, especially correlated with rural population density, road net and residential area distribution. Their weights are

0.5191,0.1945 and 0.2860 respectively. It also proves that the weights of evidence could express the relationship between grassland fire ignition risk and human activities objectively and quantitatively, which would provide decision-making support to grassland fire risk management.

---

参考文献/REFERENCES

-

---

---

更新日期/Last Update: 1900-01-01