研究报告

基于GIS的大兴安岭森林火险区划

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摘要

以黑龙江省大兴安岭图强林业局育英林场和奋斗林场为研究区，以GIS技术为支撑，选取植被类型、海拔、坡度、坡向和离居住区远近作为主要林火影响因子，采用因子加权叠置法，对研究区森林火险情况进行了定量评价，将火险等级分为无、低、中、高和极高5类.结果表明，无、低、中、高和极高火险区分别占研究区的0.37%、0.63%、38.67%、58.63%和1.70%，符合正态分布；中及以上火险区占60.33%，说明研究区森林火灾管理任务仍相当繁重；森林火险等级的地域分异明显，中部高四周低，在不同林火影响因子上的分异十分明显；火险等级与1987年的火烧强度具有较强的一致性，说明火险区划结果具有较高的可靠性，可为林业部门进行森林火灾管理提供有价值的参考.

关键词　　森林火险区划；GIS；大兴安岭

分类号

GIS　based forest fire risk zone mapping in Daxing'an Mountains

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Abstract

In this study,the Yuying and Fendou forest farms of Tuqiang Forest Bureau in Daxing'an Mountains were chosen as test areas,and their vegetation type,altitude,slop,aspect,and settlement buffer were selected as the main forest fire factors.The circumstances of forest fire risk were quantified by the factor-weights union method with the support of GIS.Four classes of forest fire risk ranging from low to extreme were generated.The none,low, moderate, high,and extremely high fire risk zones accounted for 0.37%, 0.63%, 38.67%,58.63% and 1.70%,respectively,which was in corresponding with normal distribution.About 60.33% of the test areas were predicted to be upper moderate risk zones,indicating that the forest fire management task in these areas is super onerous.There was an obvious regional difference in the distribution of forest fire risk zones,being higher in the center and lower around the center,and the difference in fire factors was also obvious.The GIS-based forest fire risk model of test areas strongly cohered with the actual fire-affected sites in 1987,which suggested that the forest fire risk zone mapping had a higher reliability,and could be used as the reference and guidance of forest fire management.

Key words　　Forest fire risk zone　　GIS　　Daxing'an Mountains

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