

生态资源环境

基于主成分分析法的铜川市环境脆弱性研究

韩中山¹, 史兴民², 裴晓敏²

1. 咸阳师范学院

2.

摘要:

摘要: 基于2001—2007年铜川市的生态环境统计数据, 运用主成分分析法分析了铜川市的环境的脆弱性的变动规律。结果显示: 铜川市的环境脆弱性指数在2001-2007年之间, 呈现出“大幅上升——大幅下降——小幅上升——小幅下降”的变化规律。在这7年中, 只有2005、2007年的环境脆弱性指数小于1, 处于轻微脆弱状态; 其余5年的环境脆弱性指数均大于1, 处于严重脆弱状态。其中环境脆弱性指数最大的年份2002(6.5624)是最小的年份2005年(0.3259)的20.13倍。建议铜川市政府应该加大污染治理本年投资总额、增加人均区绿地面积、提高工业废水排放达标量和排放达标率、控制噪声等方面继续做出不懈的努力。

关键词: 环境敏感指数; 环境适应指数; 环境脆弱指数; 主成分分析; 铜川市

The Environment Vulnerability Research of Tongchuan City Based on Principle Component Analysis

Abstract:

Abstract: Based on the statistical data of ecological environment in Tongchuan city during 2001-2007, the change of environmental vulnerability is analyzed using the method of principle component analysis. The results show that environmental vulnerability index is showing a "substantial increase - significantly decreased - slightly up - slightly down" variation during 2001-2007 years. The environmental vulnerability index is less than 1 only in 2005 and 2007 years, so Tongchuan city is slightly vulnerability grade. The environmental vulnerability index is more than 1 in other years, so Tongchuan city is highly vulnerability grade in these years. In 2002, the environmental vulnerability index is 20.13 times in 2005. We recommend that Tongchuan city government should increase total investment in pollution controllment and per capita green area, improve up-to-standard rate of wastewater emission, reduct noise in the future.

Keywords: environment sensitivity index environment adaptability index environment vulnerability index principal component analysis Tongchuan city

收稿日期 2010-07-10 修回日期 2010-08-11 网络版发布日期 2011-02-18

DOI:

基金项目:

国家自然科学基金; 陕西省重点学科建设专项基金; 咸阳师范学院科研专项基金

通讯作者: 韩中山 咸阳师范学院旅游与资源环境学院, 陕西咸阳712000

作者简介:

作者Email: xyhshsh@163.com

参考文献:

本刊中的类似文章

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(639KB)
- ▶ [HTML全文]
- ▶ 参考文献[PDF]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ 环境敏感指数; 环境适应指数; 环境脆弱指数; 主成分分析; 铜川市

本文作者相关文章

- ▶ 韩中山
- ▶ 史兴民
- ▶ 裴晓敏

PubMed

- ▶ Article by Han,S.S
- ▶ Article by Shi,X.M
- ▶ Article by Fei,X.M