

研究论文

重庆市直辖以来生态足迹的动态测度与分析

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摘要 生态足迹是近来测度生态可持续发展的一种定量方法。以重庆统计年鉴为主要数据来源, 对重庆市1997~2004年的生态足迹进行了时间序列的测度。结果表明, 2004年重庆市的人均生态足迹为1.2108 hm², 实际生态承载力为0.4696 hm², 人均生态赤字为0.7412 hm²。从1997~2004年人均生态足迹逐年增加, 人均生态承载力逐年减少, 导致人均生态赤字逐年增大, 对外来资源的依赖性越来越大。利用灰色预测模型进行了预测, 2009年人均生态赤字将达到0.8695 hm², 并在此基础上提出了减少生态赤字的一系列措施。

关键词 [生态足迹](#); [生态承载力](#); [生态赤字](#); [可持续发展](#)

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Dynamic calculation and analysis of ecological footprint of Chongqing after establishing municipality status

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Abstract In recent years, the concept of the ecological footprint developed by Wackernagel and Rees in the mid-1990s has gained much attention. Basically, the ecological footprint is the amount of productive land required to support the consumption of a given population definitely under existing technology. As a static model, the ecological footprint has been extensively used to assess the condition of sustainable development of various regions at specific points in time. However, little information is available on time series analyses and predictions of the ecological footprint. An ecological footprint time series of Chongqing in China was calculated from 1997 to 2004. Predictions of that from 2005 to 2009 were performed with the Gray Model method developed by Deng in the 1980s. The method can predict the development of the system using the continuously differential equation. In Chongqing, the ecological footprint was 1.2108 hm² per capita, while the actual ecological carrying capacity was 0.4696 hm² per capita in 2004, thus leading to ecological deficit of 0.7412 hm² per capita. From 1997 through 2004, the ecological deficit of Chongqing increased annually as the ecological footprint increased. The ecological carrying capacity, however, decreased, indicating an unsustainability of the present developmental and consumption state of Chongqing. The ecological deficit of Chongqing will reach 0.8695 hm² per capita in 2009. Based on these results, measures to reduce the ecological deficit for Chongqing were suggested such as controlling the population, adopting suitable technology to increase efficiency in resource use, changing manners of production and consumption, and protecting the environment.

Key words [ecological footprint](#) _ [ecological carrying capacity](#) _ [ecological deficit](#) _ [sustainable development](#)

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