

论文

基于水足迹理论的区域水资源利用评价

戚瑞¹, 耿涌¹, 朱庆华²

- 1. 中国科学院 沈阳应用生态研究所, 沈阳 110016;
- 2. 大连理工大学 管理学院生态规划与发展研究所, 辽宁 大连 116024

摘要:

水资源是一个地区经济发展、社会稳定的基础。水资源利用评价研究对分析区域水资源问题、制定合理的水资源战略具有重要意义。论文引入水足迹理论, 构建区域水足迹结构、效益、生态安全以及可持续性指标体系, 对区域水资源的利用现状和可持续性进行评价分析, 并以大连市为案例对其水资源利用情况进行评价, 结果表明该评价方法简便直观、合理可行。

关键词: 水足迹 水资源利用 虚拟水

Evaluation of Regional Water Resources Utilization Based on Water Footprint Method

Qi Rui¹, GENG Yong¹, ZHU Qing-hua²

- 1. Institute of Applied Ecology, CAS, Shenyang 110016, China;
- 2. Institute for Eco-planning and Development, School of Management, Dalian University of Technology, Dalian 116024, China

Abstract:

Water resource serves as an important basis for regional economic development and social stability. Hence it is necessary for us to seek an appropriate method to evaluate the overall efficiency of regional water resource so as to make a reasonable water protection strategy. Based upon water footprint theories, this paper presents an innovative evaluation method on water resources. We raised an indicator system for assessing water footprint structure, benefit, ecological security and its stability. A case study on Dalian city is conducted in order to test its rationality and applicability. Our research results show that this method is feasible and reasonable.

Keywords: water footprint water resources utilization virtual water

收稿日期 2010-09-03 修回日期 2010-10-29 网络版发布日期

DOI:

基金项目:

国家自然科学基金重点项目(71033004); 中科院百人计划项目(2008-318); 辽宁环境科研教育"123工程"(CEPF2008-123-2-1); 辽宁省社会科学规划基金(L07CJL026)。

通讯作者:

作者简介:

参考文献:

[1] 左其亭, 陈曦. 面向可持续发展的水资源规划与管理[M]. 北京: 中国水利水电出版社, 2003. [2] 吴佩林. 我国区域发展的水资源压力分析[J]. 西北农林科技大学学报: 自然科学版, 2005, 33(10): 143-149. [3] 邓晓军, 谢世友, 秦婷, 等. 基于水足迹分析方法的四川省水资源利用评价[J]. 人民长江, 2007, 38(2): 61-63. [4] Chapagain A K, Hoekstra A Y. Water footprints of nations //Value of Water Research Report Series: No. 16. Delft, the Netherlands: IHE, 2004: 1-80. [5] Kampman D A, Hoekstra A Y, Krol M S. The water footprint of India //Value of Water Research Report Series: No. 32. Delft, the Netherlands: IHE, 2008: 1-152. [6] Hoekstra A Y, Chapagain A K. Water footprints of nations: Water use by people as a function of their consumption pattern [J]. *Water Resources Management*, 2007, 21(1): 35-48. [7] Van Oel P R, Krol M S, Hoekstra A Y. A river basin as a common-pool resource: A case study for the Jaguaribe basin in Brazil //Value of Water Research Report Series: No. 24. Delft, the Netherlands: IHE, 2007: 1-36. [8] Hoekstra A Y, Chapagain A K. The water footprints of Morocco and the Netherlands //Value of Water Research Report Series: No. 21. Delft, the Netherlands: IHE, 2006: 1-30. [9] Hoekstra A Y, Chapagain

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(1KB)
- ▶ HTML
- ▶ 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

- ▶ 水足迹
- ▶ 水资源利用
- ▶ 虚拟水

本文作者相关文章

A K. The water footprints of Morocco and the Netherlands: Global water use as a result of domestic consumption of agricultural commodities [J]. *Ecological Economics*, 2007, 64(1): 143-151. [10] Liu J, Savenije H H G. Food consumption patterns and their effect on water requirement in China [J]. *Hydrology and Earth System Sciences*, 2008, 12(3): 887-898. [11] Chapagain A K, Hoekstra A Y, Savenije H H G, *et al.* The water footprint of cotton consumption: An assessment of the impact of worldwide consumption of cotton products on the water resources in the cotton producing countries [J]. *Ecological Economics*, 2006, 60(1): 186-203. [12] Chapagain A K, Hoekstra A Y. The water footprint of coffee and tea consumption in the Netherlands [J]. *Ecological Economics*, 2007, 64(1): 109-118. [13] Chapagain A K, Orr S. An improved water footprint methodology linking global consumption to local water resources: A case of Spanish tomatoes [J]. *Journal of Environmental Management*, 2008, 90: 1219-1228. [14] Hoekstra A Y. Virtual water: An introduction //Virtual Water Trade: Proceedings of the International Expert Meeting on Virtual Water Trade-Value of Water Research Report Series: No. 12. Delft, the Netherlands: IHE, 2003: 13-23. [15] 邓晓军, 谢世友, 王新华. 重庆市2004年的水足迹分析[J]. 长江流域资源与环境, 2007, 16(5): 593-596. [16] 王新华, 徐中民, 李应海. 甘肃省2003年的水足迹评价[J]. 自然资源学报, 2005, 20(6): 909-915.

本刊中的类似文章

1. 王新华, 徐中民, 李应海. 甘肃省2003年的水足迹评价[J]. 自然资源学报, 2005,20(6): 909-915

文章评论 (请注意:本站实行文责自负, 请不要发表与学术无关的内容!评论内容不代表本站观点.)

反 馈 人	<input type="text"/>	邮箱地址	<input type="text"/>
反 馈 标 题	<input type="text"/>	验证码	<input type="text"/> 0152