

QK1903562



# 生态学报

ACTA ECOLOGICA SINICA

第39卷 第4期 Vol. 39 No. 4 2019

ISSN 1000-0933 CN 11-2031/Q



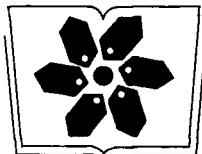
中国生态学学会  
中国科学院生态环境研究中心  
主办  
万方数据



科学出版社  
Science Press

出版

万方知库  
Eco-Environmental  
Knowledge Web



中国科学院科学出版基金资助出版

# 生态学报

(SHENTAI XUEBAO)

第39卷 第4期 2019年2月 (半月刊)

## 目 次

### 城市化与区域生态耦合及调控机制专栏

- 实现城市可持续发展的系统转型 ..... 吕永龙,曹祥会,王尘辰 (1125)  
持续城镇化对中国推进实施联合国可持续发展目标的作用 ..... 张 盛,吕永龙,苑晶晶,等 (1135)  
城市食物-能源-水关联关系:概念框架与研究展望 ..... 张力小,张鹏鹏,郝 岩,等 (1144)  
城市化对土壤生态环境的影响研究进展 ..... 谢 天,侯 鹰,陈卫平,等 (1154)  
绿色基础设施的洪水调节服务供需测度研究进展 ..... 颜文涛,黄 欣,王云才 (1165)  
基于空间优先级的快速城市化地区绿色基础设施网络构建——以南京市浦口区为例 .....  
..... 魏家星,宋 轶,王云才,等 (1178)  
基于矩阵分析的水文调节服务供需关系时空分异研究——以嘉兴市为例 ..... 刘 颂,杨 莹,王云才 (1189)  
京津冀城市群能源协同发展背景下能源生产结构变化探究 ..... 王 朝,李伟峰,韩立建 (1203)  
京津冀城市群城市化与生态环境时空分异及协同发展格局 ..... 梁龙武,王振波,方创琳,等 (1212)  
京津冀农民专业合作社时空演化及影响因素解析 ..... 王振波,王新明 (1226)  
城市住宅建筑系统流量-存量动态模拟——以北京市为例 ..... 唐守娟,张力小,郝 岩,等 (1240)  
南昌市城镇空间扩展与景观生态风险的耦合关系 ..... 王 飞,叶长盛,华吉庆,等 (1248)  
丝绸之路经济带核心区新疆城镇建设用地扩展的时空演变特征及影响机理 .....  
..... 高 倩,方创琳,张小雷,等 (1263)  
典型城市单元的土壤重金属溯源方法与实证研究 ..... 刘胜然,王铁宇,汤 洁,等 (1278)  
我国生态环境大数据建设方案实施及其公开效果评估 ..... 张 毅,贺桂珍,吕永龙,等 (1290)  
多源空间数据融合的城市人居环境监测模型与应用研究 ..... 陈 婷,武文斌,何建军,等 (1300)

### 自然保护地体系与国家公园建设专栏

- 基于国际经验的我国国家公园遴选探讨 ..... 虞 虎,钟林生 (1309)  
中国国家公园的边界、分区和土地利用管理——来自自然保护区和风景名胜区的启示 .....  
..... 何思源,苏 杨,闵庆文 (1318)  
国家公园生态保护补偿的政策框架及其关键技术 ..... 刘某承,王佳然,刘伟玮,等 (1330)  
人类活动对中国国家级自然保护区生态系统的影响 ..... 曹 巍,黄 麟,肖 桐,等 (1338)  
生态保护地空间重叠与发展冲突问题研究 ..... 张丽荣,孟 锐,潘 哲,等 (1351)  
三江源国家公园生态功能时空分异特征及其重要性辨识 ..... 曹 巍,刘璐璐,吴 丹,等 (1361)  
功能约束条件下的钱江源国家公园体制试点区游憩利用适宜性评价研究 .....  
..... 肖练练,钟林生,虞 虎,等 (1375)

祁连山国家公园青海片区人兽冲突现状与牧民态度认知研究 ..... 程一凡,薛亚东,代云川,等 (1385)  
基于社会网络分析的全球自然保护地治理模式研究 ..... 解钰茜,曾维华,马冰然 (1394)

#### 生态补偿与生态效益评估专栏

黔东南苗族侗族自治州生态保护成效评估 ..... 邹梓颖,肖 燮,欧阳志云,等 (1407)  
围填海区渔业生态损害的补偿标准定量研究——以舟山近岸海域为例 .....  
..... 俞存根,张 平,郭朋军,等 (1416)  
武汉城市圈生态服务价值时空演变分析及影响因素 ..... 赵育恒,曾 晨 (1426)  
基于生物量的塔里木河下游胡杨(*Populus euphratica*)生态服务价值评估 .....  
..... 王希义,彭淑贞,徐海量,等 (1441)  
海河流域生态水分利用效率时空变化及其与气候因子的相关性分析 ..... 赵安周,张安兵,冯莉莉,等 (1452)  
海湾景观生态脆弱性及其对人类活动的响应——以东海区为例 ..... 田 鹏,李加林,姜忆湄,等 (1463)  
苗期紫花苜蓿株体对不同地区垂穗披碱草种子萌发生长的化感作用 .....  
..... 包赛很那,苗彦军,邓时梅,等 (1475)

期刊基本参数:CN 11-2031/Q \* 1981 \* m \* 16 \* 360 \* zh \* P \* ￥90.00 \* 1510 \* 32 \* 2019-02



封面彩图提供:付战勇 中国矿业大学(北京) E-mail: fzy721521@126.com

**ACTA ECOLOGICA SINICA Vol.39, No.4 February, 2019 (Semimonthly)**  
**CONTENTS**

**Coupling and Coordination between Urbanization and Regional Ecology**

- Systematic transformation towards urban sustainable development ..... LÜ Yonglong, CAO Xianghui, WANG Chenchen (1125)  
Roles of sustainable urbanization in promoting the implementation of UN Sustainable Development Goals in China .....  
..... ZHANG Sheng, LÜ Yonglong, YUAN Jingjing, et al (1135)  
Urban food-energy-water (FEW) nexus: conceptual frameworks and prospects .....  
..... ZHANG Lixiao, ZHANG Pengpeng, HAO Yan, et al (1144)  
Impact of urbanization on the soil ecological environment: A review ..... XIE Tian, HOU Ying, CHEN Weiping, et al (1154)  
Measurements of the supply and demand for the flood regulation ecosystem services of green infrastructure: A review .....  
..... YAN Wentao, HUANG Xin, WANG Yuncai (1165)  
Urban green infrastructure building for sustainability in areas of rapid urbanization based on evaluating spatial priority: a case  
study of Pukou in China ..... WEI Jiaxing, SONG Yi, WANG Yuncai, et al (1178)  
Mapping supply and demand differentiation of hydrological regulation service based on matrix analysis: a case study of Jiaxing  
City, Zhejiang Province ..... LIU Song, YANG Ying, WANG Yuncai (1189)  
Study on the change in energy production structure under the energy coordinated development strategy of Beijing-Tianjin-Hebei  
urban agglomeration, China ..... WANG Zhao, LI Weifeng, HAN Lijian (1203)  
Spatiotemporal differentiation and coordinated development pattern of urbanization and the ecological environment of the Beijing-  
Tianjin-Hebei urban agglomeration ..... LIANG Longwu, WANG Zhenbo, FANG Chuanglin, et al (1212)  
Analysis of the spatial and temporal evolution and influencing factors of farmers' professional cooperatives in Beijing-Tianjin-  
Hebei ..... WANG Zhenbo, WANG Xinming (1226)  
Dynamic modeling of stock and flow in an urban residential building system: A case study of Beijing .....  
..... TANG Shoujuan, ZHANG Lixiao, HAO Yan, et al (1240)  
Coupling relationship between urban spatial expansion and landscape ecological risk in Nanchang City .....  
..... WANG Fei, YE Changsheng, HUA Jiqing, et al (1248)  
Spatio-temporal evolution characteristics and mechanisms of influence of urban construction land expansion in Xinjiang, the Core  
Area of the Silk Road Economic Belt ..... GAO Qian, FANG Chuanglin, ZHANG Xiaolei, et al (1263)  
Source apportionment methods of soil heavy metals in typical urban units: an empirical study .....  
..... LIU Shengran, WANG Tieyu, TANG Jie, et al (1278)  
Evaluation of big data construction for eco-environment and its information disclosure by environmental agencies in China .....  
..... ZHANG Yi, HE Guizhen, LÜ Yonglong, et al (1290)  
Urban human settlements monitoring model and its application based on multi-source spatial data fusion .....  
..... CHEN Ting, WU Wenbin, HE Jianjun, et al (1300)  
**Natural Protected Area System and National Park Construction**  
Discussion on the selection criteria of national parks in China based on international experience .....  
..... YU Hu, ZHONG Linsheng (1309)  
Boundary, zoning, and land use management of the China National Parks: Learning from Nature Reserves and Scenic Areas .....  
..... HE Siyuan, SU Yang, MIN Qingwen (1318)  
Policy framework and key technologies of ecological protection compensation to national park .....  
..... LIU Moucheng, WANG Jiaran, LIU Weiwei, et al (1330)  
Effects of human activities on the ecosystems of China's National Nature Reserves .....  
..... CAO Wei, HUANG Lin, XIAO Tong, et al (1338)  
Research on the space-overlap and development conflicts between types of protected areas .....  
..... ZHANG Lirong, MENG Rui, PAN Zhe, et al (1351)

- Spatial and temporal variations and the importance of hierarchy of ecosystem functions in the Three-river-source National Park ..... CAO Wei, LIU Lulu, WU Dan, et al (1361)
- Assessment of recreational use suitability of Qianjiangyuan National Park Pilot under the zoning constraints ..... XIAO Lianlian, ZHONG Linsheng, YU Hu, et al (1375)
- The research of human-wildlife conflict's current situation and the cognition of herdsmen's attitudes in the Qinghai area of Qilian Mountain National Park ..... CHENG Yifan, XUE Yadong, DAI Yunchuan, et al (1385)
- Social network analysis of governance types of global protected areas ..... XIE Yuxi, ZENG Weihua, MA Bingran (1394)
- Assessment of Eco-compensation and Ecological Benefits**
- Evaluation of the effectiveness of ecological protection in Qiandongnan Miao-Dong Autonomous Prefecture ..... ZOU Ziying, XIAO Yi, OUYANG Zhiyun, et al (1407)
- Quantitative study on compensation standards for ecological damage to fishery in reclaimed areas: A case study from Zhoushan coast ..... YU Cungen, ZHANG Ping, GUO Pengjun, et al (1416)
- Analysis of spatial-temporal evolution and factors that influences ecological service values in Wuhan Urban Agglomeration, China ..... ZHAO Yuheng, ZENG Chen (1426)
- Assessment of ecological service value based on biomass of *Populus euphratica* in the lower reaches of the Tarim River ..... WANG Xiyi, PENG Shuzhen, XU Hailiang, et al (1441)
- Spatio-temporal characteristics of water-use efficiency and its relationship with climatic factors in the Haihe River basin ..... ZHAO Anzhou, ZHANG Anbing, FENG Lili, et al (1452)
- Ecological vulnerability of the bay landscape and its response to human activities: a case study of the East China Sea ..... TIAN Peng, LI Jialin, JIANG Yimei, et al (1463)
- Allelopathic effects of alfalfa (*Medicago sativa*) in the seedling stage on seed germination and growth of *Elymus nutans* in different areas ..... BAO Saihenna, MIAO Yanjun, DENG Shimei, et al (1475)

# 《生态学报》2019年征订启事

《生态学报》是由中国科学技术协会主管,中国生态学学会、中国科学院生态环境研究中心共同主办的生态学高级专业学术期刊,创刊于1981年,报道生态学领域前沿理论和原始创新性研究成果。坚持“百花齐放,百家争鸣”的方针,依靠和团结广大生态学科研工作者,探索生态学奥秘,为生态学基础理论研究搭建交流平台,促进生态学研究发展,为我国培养和造就生态学科研人才和知识创新服务、为国民经济建设和发展服务。

《生态学报》主要报道生态学重要基础理论和应用研究的原始创新性科研成果。主要刊载文章类型有:研究综述;研究论文;学术信息与动态,生态学新理论、新方法、新技术介绍;新书评介及开放实验室介绍等。欢迎广大科技工作者、科研单位、高等院校、图书馆等订阅。

《生态学报》半月刊,大16开本,280页,国内定价90元/册,全年定价2160元。

办公电话:010-62941099, 010-62843362      E-mail: shengtaixuebao@rcees.ac.cn

投稿网址: www.ecologica.cn

执行副主编 孔红梅      责任编辑 刘昕 全元      编辑 朱晶莹 宗静 彭小琼

生态学报  
(SHENTAI XUEBAO)  
(半月刊 1981年3月创刊)  
第39卷 第4期 (2019年2月)

ACTA ECOLOGICA SINICA

(Semimonthly, Started in 1981)

Vol. 39 No. 4 (February, 2019)

编  辑 《生态学报》编辑部  
地址:北京海淀区双清路18号  
邮政编码:100085  
电话:(010)62941099  
www.ecologica.cn  
shengtaixuebao@rcees.ac.cn

主  编 傅伯杰  
主  管 中国科学技术协会  
主  办 中国生态学学会  
中国科学院生态环境研究中心  
地址:北京海淀区双清路18号  
邮政编码:100085

出  版 科学出版社  
印  刷 北京宝昌彩色印刷有限公司  
国内发行 全国各地邮局  
发行代号 82-7  
国外发行 中国国际图书贸易总公司  
发行代号 M670  
订  阅 科学出版社期刊发行部  
010-64017032, 010-64017539  
或扫描封底二维码  
广告经营 京海工商广字第8013号

Edited by Editorial board of  
ACTA ECOLOGICA SINICA  
Add: 18, Shuangqing Street, Haidian, Beijing 100085, China  
Tel: (010) 62941099  
www.ecologica.cn  
shengtaixuebao@rcees.ac.cn

Editor-in-chief FU Bojie  
Supervised by China Association for Science and Technology  
Sponsored by Ecological Society of China  
Research Center for Eco-environmental Sciences, CAS  
Add: 18, Shuangqing Street, Haidian, Beijing 100085, China

Published by Science Press  
Add: 16 Donghuangchenggen North Street,  
Beijing 100717, China

Printed by Beijing Baochang Color Printing Co., Ltd,  
Beijing 100094, China

Subscribe by Science Press  
Tel: 010-64017032, 010-64017539  
E-mail: journal@cspg.net

Domestic issue All Local Post Offices in China 82-7  
Foreign issue China International Book Trading Corporation  
Add: P.O.Box 399 Beijing 100044, China

ISSN 1000-0933  
9 771000 093194



ISSN 1000-0933      CN 11-2031/Q      定价 90.00 元