Evaluation on Ecosystem Service Value of Dongting Lake Wetland and Ecological Restoration Countermeasures

MAO De-Hua,WU Feng,LI Jing-Bao,PI Hong-Li(College of Resources and Environment Science,Hunan Normal University,Changsha 410081,Hunan,P.R.China)

To evaluate the ecological service value of Dongting Lake wetland and put forward the ecological restoration countermeasures. The market value method,shadow engineering approach,carbon tax method and alternative expenses method were used to evaluate the ecological service value of Dongting Lake wetland.The system of ecological restoration countermeasures was put forward based on the evaluation results and principle of restoration ecology. Research results showed that Dongting Lake wetland was of the huge and multiple ecological service value, especially in product-producing value, adjusted and stored the flood water value. In order to manage the Dongting Lake wetland well, it must be the guided by the theory and principle of restoration ecology. First task is restoring the ecological function, the target is developing the wetland industrial group which is accommodated to the wetland ecological environment etc. The other functions are restored adequately according to the sustainable use principle. The main methods are to design landscape ecology, construct the ecological controling technique are used in the restoration of the former function, habitat renewal and habitat mitigation and natural maintenance of biology diversity must be strengthened according to the priority principle. Water resources engineering and biological controlling technique are used in the restoration of the former function, habitat renewal and habitat mitigation and natural protection area construction are the measures of restoration of the latter function. The product-producing function should be excavated adequately according to the sustainable use principle. The main methods are to design landscape ecology, construct the wetland industrial group which is accommodated to the wetland ecological environment etc. The other functions are restored by the environmental protection keeping to the principle of sustainable development and benefit.

【Key Words】: wetland ecosystem ecological service value evaluation ecological restoration strategy Dongting Lake
【Fund】: 湖南省教育厅重点项目(05A041); 湖南省自然科学基金项目(06JJ2061); 湖南省科技厅软科学项目(04ZH3069)资助
【Category Index】: X171.4

Download(CAJ format) Download(PDF format)
CAJViewer7.0 supports all the CNKI file formats; AdobeReader only supports the PDF format.

【References】

2 LU Xin-Guo,LIU Xiao-Hui (Northeast Institute of Geography and Agroecology,Chinese Academy of Sciences,Changchun, Jilin 130012); Wetland Research Progresses in China—Dedicated to the 50th Anniversary of Northeast Institute of Geography and Agroecology,CAS[J]; Scientia Geographica Sinica; 2008-03
3 ZHOU Bao-hua,CAO Jing-jing,ZHU Chao-ping,JIN Bao-shi/Resources & Environment Department,Anqing Teachers' College,Anqing 246011 Anhui,China); Valuation of wetland ecosystem services along the Yangtze River in Anqing, Anhui Province[J]; Geographical Research; 2011-12
4 MAO De-hua1,WANG Yi-Ning2,PENG Bao-Fa3,LI Jie1,LI Jing-Bao1(1.College of Resource & Environment Science,Hunan Normal University,Changsha 410081,Hunan,P.R.China; 2.Institute of Geographical Sciences and Natural Resources Research,Chinese Academy of Sciences,Beijing 100101,P.R.China; 3.Department of Ecology,Resources and Environment,Hunan University of Art and Science,Changde 415000,Hunan, P.R.China); Case Analysis of the Policy of Dongting Lake Ecological Restoration[J]; World Wetland.
Evaluation on Ecosystem Service Value of Dongting Lake Wetland …logical Restoration Countermeasures— (Wetland Science) 2007年01期 28/03/2013 17:38

YAN Shu-Jun.1,HONG Wei.2,WU Cheng-Zhen.2,LI Xin-Ju1(1.College of Landscape Architecture,Fujian Agricultural and Forestry University,Fuzhou 350002,Fujian.P.R.China;2.College of Forestry,Fujian Agricultural and Forestry University,Fuzhou 350002,Fujian,P.R.China);The Dynamic of Wetland Landscape Pattern of Langqi Island in the Mouth of Min River[J];Wetland Science;2010-03

ZHANG Ping.MA Tao (Department of Environmental Science and Engineering,Fudan University,Shanghai)

200433,P.R.China);A Comment on Studies on Evaluation of Service Value of Wetland Ecosystem in China[J];Wetland Science;2011-02

FENG Yun-Yun1.LI CHENG-Wei1.GAO Yi1.SHEN AI-Chun1.2.1 (Monitoring Bureau of Hydrology and water Resources,Taihu Basin Authority,Wuxi 214024:2 College of Hydrology and water Resources,Hohai University,Nanjing 210098);Issues on e Valuation of Wetland Ecosystem Services[J];Wetland Science & Management;2011-03

ZHOU Yi-ping1.ZOU Ju-xiang2 LIU Shou-dong3 YANG Ting3 LING Yang3 CHEN Tao1 (Hengyang Meteorological Bureau,Hengyang 421001,China;2,Shantou Meteorological Bureau,Shantou 515100,China;3,Nanjing University of Information Science and Technology,Nanjing 210044,China);Evaluation of wetland ecosystem service value in Qinhu Lake,Jiangsu province[J];Journal of Meteorology and Environment;2010-02

Yang Lu1,2,Hu Zheng1,#,Li Xinju1,3,LI Jing1,Zhao Yanling1 (1.Institute of Land Reclamation and Ecology,China University of Mining and Technology(Beijing),Beijing 100083,China;2.Department of Mining Resources Exploitation and Management,Ministry of Land and Resources,Beijing 100053,China;3.College of Resources and Environment of Shandong Agricultural University,Ta'ian 271018,China);Analysis of land use change and ecosystem service value in the overlapped areas of crop and mineral production in Zoucheng City[J];Transactions of the Chinese Society of Agricultural Engineering;2007-12

YAO Wei-hao1,SU Chun-hua2,CHEN Bin3 (1.School of Earth and Space Sciences,Peking University,Beijing 100871,China;2,School of Environment and Civil Engineering,Wuhan Institute of Technology, Wuhan 430073,China;3.State Key Joint Laboratory of Environment Simulation and Pollution Control,School of Environment,Beijing Normal University,Beijing 100875,China);Progress of Wetlands Ecosystem Service Evaluation[J];Research of Soil and Water Conservation;2009-03

【Citations】

Chinese Journal Full-text Database 7 Hits

MAO De-hua1,2,3;XIA Jun1,2,3.1 (College of Resources and Environment Science, Hunan Normal University, Changsha Hunan 410081, China; 2. College of Hydraulic and Electric Engineering, Wuhan University, Wuhan Hubei 430072, China; 3. Institute of Geographical and Environmental Problems and Their Causing Mechanisms in Dongting Lake Wetland[J];Journal of Glaciolgy and Geocryology;2002-04

REN Zhiyuan, Li Jing (College of Tourism and Environmental Sciences, Shaanxi Normal University, Xi'an 710062, China);The Valuation of Ecological Services from the Vegetation Ecosystems in the Qinling-Daba Mountains[J];Acta Geographica Sinica;2003-04

ZHOU Yue yun (Department of Geography, College of Resources and Environment Science, Hunan Normal University, Changsha Hunan 410081, China);The Preliminary Research of the Tourist Development in Dongting Lake Region[J];Journal of Natural Science of Hunan Normal University;2002-02

Mao De-hua1,2,3,XIA Jun1,2,3,Wang Li-hui4,Tang Zhong-wang5 (1.State Key Laboratory of Water Resources and Hydropower Engineering Science, Wuhan University, Wuhan 430072, China; 2. College of Resources and Environment Science, Hunan Normal University, Changsha 410081, China; 3. Institute of Geographic Science and Natural Resources Research, Key Laboratory of Water Cycle and Related Surface Processes, Chinese Academy of Sciences, Beijing 100101, China; 4. Institute of Water Resources and Hydropower of Nanjing, Nanjing 210029, China; 5. College of Economy, Changsha Science and Technology University, Changsha 410076, China);Evaluation of sustainable land use in the region with high risk of the flood and waterlogging in the Dongting Lake[J];Transactions of The Chinese Society of Agricultural Engineering;2005-07

MAO De-hua (College of Territorial Resources, Hunan Normal University, Changsha 410081, China);Assessment and analysis of flood-waterlogging disaster condition in Dongting lake region[J];JOURNAL OF NATURAL DISASTERS;2000-03

LI Jing-bao, ZHU Xiang, CAI Bing-hua (College of Territorial Resources, Hunan Normal University, Changsha 410081, China);Eco-agricultural patterns for disaster prevention in wetland restoration area of Dongting Lake[J];Journal of Natural Disasters;2001-04

ZHUANG Da-chang 1,OU Wei-xin 2,3,DING Deng-shan 1 (1.Department of Urban and Resource, Nanjing University, Nanjing 210093, China; 2. Nanjing Institute of Geography and Limnology, CAS; 3. Graduate School of the Chinese Academy of Sciences, Beijing 100039, China);Evaluation of the lake recovery area eco-economy benefit in Dongting Lake wetland[J];Journal of Natural Resources;2003-05

【Citations】

Evaluation on Ecosystem Service Value of Dongting Lake Wetland ...logical Restoration Countermeasures-- (Wetland Science) 2007年01期

Page 3 of 5