EVALUATION OF URBANIZED ECOLOGICAL ENVIRONMENT QUALITY: A CASE STUDY ON BEIJING CHAOYANG DISTRICT

Zhang Chen¹,², Li Yuan³, Lv Shihai², Fang Jiande³, Teng Yanguo¹, Zhang Haibo², Li Daiqing²

¹College of Water Sciences, Beijing Normal University, Beijing 100875, China; Engineering Research Center of Groundwater Pollution Control and Remediation, Ministry of Education, Beijing 100875, China
²State Environmental Protection Key Laboratory of Regional Eco-process and Function Assessment, State Key Laboratory of Environmental Criteria and Risk Assessment, Chinese Research Academy of Environmental Sciences, Beijing 100012, China
³South China Institute of Environmental Sciences, Guangzhou 510655, China

Abstract

The objective of this study is to evaluate the urbanized ecological environment quality with land use classification system (artificial ecological subsystem, water ecological subsystem and continental ecological subsystem). Three land use type ecosystem combined with characteristics of urban ecological environment conditions (space pattern, environment characteristics, biological characteristics, ecosystem service) established the urban ecological environment quality synthetic evaluation index system. Based on the database, this study integrated Delphi, AHP and Integrated Eco-environment Assessment Index Method. The results showed that Beijing Chaoyang district comprehensive urban ecological quality was middle level. Water resources shortage, the total population pressure and urban green spaces shrinkage were negative factors possibly attributable to decrease ecological quality status.

Key words: ecological quality, evaluation index, land use, urban environment,

Received: August, 2012; Revised final: July, 2013; Accepted: August, 2013