

Ecological network analysis for water-land resource in urban socio-economic system: a nexus perspective

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ABSTRACT

The rapid development of urbanization makes the contradiction between the demand and supply of water and land resources increased gradually. Due to the intertwined relationship of water and land resources, great efforts are need to coordinate the water conservation and intensive use of land resources, in order to realize the efficiency and stability of economic development and agricultural production. This study investigates the coupling effects between water-land resources among different sectors in urban socio-economic network. Combing input-output table and ecological network analysis, the urban water-land nexus network model is constructed to analyze the coupling effects among water and land by quantifying the direct and indirect interactions within and among sub-systems. It quantifies the coupling coefficient between water-land resources and evaluate the efficiency and resilience of water-land utilization. It quantifies the control and utility relationships of water-land nexus between sectors and identifies the key sectors and critical pathways of water-land nexus network.

Keywords: Water-land nexus; Ecological network analysis; Resource allocation

NONMENCLATURE

Abbreviations

APEN Applied Energy

Symbols

n Year

1. INTRODUCTION



Fig 1 Small diagram.

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ACKNOWLEDGEMENT

xxx.



Fig 2 Large diagram.

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