

IWRA World Water Congress Beijing, China

September 2023

Date: Sept. 14th Hours: 14:00-15:30 Room: Room 1 Session No.: RS 30 Theme:
1-4 Submission No.: O-1-4-38

Title

Research on the practice of ecological compensation for strategic reserve of water resources of Miyun Reservoir in Beijing based on the realization of ecological product value

Presenter

Prof. Dongchun Ma, Beijing Water Science and Technology Institute

Co-author(s)

Mr. Xujiang Xia, Hohai University

Dr. Xiaoxia Zhang, Beijing Water Science and Technology Institute

Sub-theme

1. Water-Human-Economy(Agriculture, Industry, City...)-Ecology Nexus under a Changing Environment

Topic

1-4. Water security challenges in key regions

Body

Beijing is recognized as a region with serious water shortage in the world, and its water resource system is very fragile. As an important surface drinking water source and strategic reserve base of water resources, Miyun Reservoir plays an important role in ensuring water security, which is related to the safety of urban and rural water supply, the smooth operation of the city and the sustainable high-quality development of the economy and society. This study takes the Miyun reservoir basin as the research area. By evaluating the important positioning of Miyun reservoir as the strategic reserve of water resources in Beijing, based on the theoretical basis of the realization of ecological product value, through serial multiple sub-models, using the small-scale ecological service value evaluation model of spatial analysis method, and introducing the location quotient variable of strategic reserve ecological function importance to build the evaluation model of watershed ecosystem service value spillover The model of economic development level and willingness to pay in the beneficiary area, and the integrated model of water resources strategic reserve compensation are constructed in series. Establish a compensation

mechanism for strategic reserve of water resources in the Miyun reservoir basin, take the protection and strategic reserve of water resources in the Miyun reservoir basin as the goal, calculate the strategic reserve of water resources in the Miyun reservoir basin, make horizontal compensation for strategic reserve of water resources in the Miyun reservoir basin, set up a value conversion channel, support innovation and build a perfect ecological compensation system. Through the mechanism of policy guarantee, organization management, fund management and establishment of assessment, the beneficiary areas will jointly assume the responsibility of water source protection, establish a strategic reserve pattern of water resources shared by 3+N, and ensure the security pattern of water resources in Beijing.

Keywords

ecological compensation, strategic reserve of water resources, Miyun Reservoir in Beijing, realization of ecological product value