

## **Analysis of ecohydrological characteristics and factors affecting the Zhalong riparian wetland**

**XINGJU WANG<sup>1,2</sup>, SHIGUO XU<sup>1</sup> & DAQING LIU<sup>1</sup>**

*<sup>1</sup>School of Civil & Hydraulics Engineering, Dalian University of Technology, Dalian 116024, China  
[xjw@sdu.edu.cn](mailto:xjw@sdu.edu.cn)*

*<sup>2</sup>School of Civil & Hydraulics Engineering, Shandong University, Jinan 250061, China*

**Abstract** The Zhalong wetland is a typical riparian wetland, the coupling characteristics between hydrological and biodynamic processes are obvious, and the ecohydrological characteristics control the development scope, intensity and direction of the aquatic ecosystem. In this paper, the authors describe the ecohydrological characteristics of Zhalong wetland, showing that its external integration and interior fragility are the most important features. Furthermore, the dominant factors affecting the wetland eco-hydrology are analysed; they are regional climatic changes, such as, precipitation and air temperature, and human factors including soil exploitation and hydraulic engineering. Finally it is shown that there is a good correlation between the wetland area change and climatic factors, and that regional climatic change and human factors across the whole basin have a remarkable influence on the wetland ecosystem. Urgent scientific research is proposed for the wetland restoration and reconstruction in the near future.

**Key words** affecting factors; climatic change; ecohydrological characteristics; wetland ecosystem

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