



## **Soil and Water Conservation Monitoring Analysis and Design of Touring Development Project In Yushan Town Panan County**

Dongfeng Li, Fuqing Bai, Jianyong Hu, and Ye Zhou

ZheJiang University of Water Resources and Electric Power, Institute of Water Resources and Environment Engineering, Department of Hydraulic Engineering, Hangzhou, China (286335070@qq.com)

Yushan town, is a county in Panan county. It locate in the northeast of Pan 'an county. Panan county Yulongxigu valley and slope land villages tourism development project is the collection mountain ecological agriculture, tourism, the characteristics of home stay facility with characteristics of mountain vacation village, and other functions in one of ecological tourism resort projects [U+FF0C] The core block is located in the Zhanggao forest farm in Yushan town. In order to promote the comprehensive development and utilization of low hilly slopes and Explore the new model of low hill and gentle slope construction land. The project area covers an area of about 7750 mu, with an ecological reservation of 7599 mu. The first phase of the project is about 152.5 mu, which will be started in September 2017. The project will be completed in September 2020 with a total investment of 1 billion yuan(RMB).

The construction of the project resulted in soil erosion. Based on the characteristics of the project, the soil and water conservation monitoring was analyzed designed.

Some soil erosion factors are analysed, such as subtropical monsoon climate zone, topographic change. along the project involving state level key prevention area, water loss and soil erosion at the provincial level key soil and water loss prevention area, the emphasis on soil erosion control at the provincial level, the main erosion types of water erosion, part of the zone is gravity erosion. The natural environment of the project is complex, the soil erosion is strong and the erosion resistance is weak. The area of the project is sensitive, and once soil erosion occurs, it will have a great impact on the surrounding ecological landscape environment.

Key areas of soil and water conservation monitoring. Including excavation in subgrade, engineering (filling) surface protection, bridge piles of man-hour mud pit protection and recovery, change the river (road) project completion, around late bridge construction and lower river course construction waste cleaning and grading, conditions of cleaning, abandon slag field location, quantity of slag, slag, material qualitative, comprehensive utilization and implementation of protective measures, the construction layout of temporary facilities location, size and protective measures, the resettlement areas, the location, the measures and implementation progress of compensation and resettlement, etc.

Methods of soil and water conservation monitoring. (1)Cs-137 method. (2) Simple runoff plot method. It is mainly used for Abandon slag field slope surface erosion observation.(3) Grit chamber method. (4) The erosion gully measuring method. (5) Unmanned aerial vehicle aerial survey method. (6) Investigation, search method.

Conclusion. Designed of soil and water conservation monitoring scheme can improve the overall technical level of the project of soil and water conservation monitoring and guide engineering construction in the process of implement of soil and water conservation work, as well as for reference to similar soil monitoring work.

### **Acknowledgments**

The study is supported by the National Key R & D Project (2016YFC0402502).

Co-first authors, all authors Contributed to this work equally

Co-corresponding authors: DongFeng LI:286335070@qq.com, Fuqing Bai: 26504580@qq.com, Jianyong Hu: 81585851@qq.com, Ye Zhou: 3043109291@qq.com