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Research on the Risk Associated with Rural Drinking Water Safety Based on Catastrophe Theory

PDF (Size: 300KB) PP. 356-362 DOI : 10.4236/jwarp.2011.36045

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ABSTRACT

In this study, based on the analysis of the catastrophic risk of rural drinking water, with the representative villages in Ya' an as study objects and setting the four evaluation standards: water quality, water quantity, the Guarantee Probability for water Supply and the Convenience Level of the Access to Water Supply as the basic framework, a Rural Drinking Water Safety Assessment was developed (RDWSA). Research showed that Catastrophe Theory was applicable in the RDWSA. Adding RDWSA based on Catastrophe Theory to the supportive system for decision-making in Ecological Hydrographic Management Decision Support System of Ya' an helped obtain the rank and results of RDWSE by the automatic calculation of programs, which could assist the risk assessment and risk management associated with rural drinking water in Ya' an.

KEYWORDS

Catastrophe Theory, Risk, Rural Drinking Water Safety, Ya' an

Cite this paper

C. Wang, F. Ni, Y. Deng and L. Jiang, "Research on the Risk Associated with Rural Drinking Water Safety Based on Catastrophe Theory," *Journal of Water Resource and Protection*, Vol. 3 No. 6, 2011, pp. 356-362. doi: 10.4236/jwarp.2011.36045.

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