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Evaluation and grade partition of urban village fire risk: A case study of NanTing village, Guangzhou

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With the rapid development of Chinese economy, the process of industrialization and urbanization is gradually accelerated. Meanwhile, the fire accidents happening in city, especially in city villages have been raising, which result in the loss with over billion Yuan, and pose severe threats to personal safety as well as property safety. Taking the example of NanTing village located in Guangzhou Higher Education Mega Center. This paper carries out field investigation about different aspects-fire hydrant, fire road, housing structure and usage, fire water supply, and then establishes assessment model about the ability of urban village fire protection by GIS and Analytic Hierarchy Process to evaluate level of the ability of fire protection ability. Fire protection ability of NanTing village is divided into four levels. More specifically, the areas of four different types of fire protection ability (that are bad, weak, fine and best) are 823.52 m², 13458.92 m², 60318.27 m² and 196972.99 m² respectively. The total area of the bad and the weak are 14282.44 m², accounting for 5.263% of NanTing village's total land area, out of which the fire danger area with serious and dangerous level are altogether 18.18% of total construction area. Finally, we analyze the reason why part of NanTing village is weak in stopping fire. This proposed method can be used to analyze fire risk and to make up reconstruction planning for City Village, and the conclusions are also of value for the safety management for NanTing village.

Biography

Wu Da-fang has completed his PhD in Physical Geography from Sun Yat-sen University in Centre of Land Use Research, Geography Science and Planning School and now is a Senior Research Assistant at City University of Hong Kong, Department of Public Policy. He is the Associate Department Chairman of School of Geographical Sciences. He has published more than 20 papers in Chinese core journals, now his research area of interest is protection and utilization of land resources and application of GIS.

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