

土石流災害認知及偏好分析—多重屬性效用理論之應用

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摘 要 在 921 大地震之後，雲林縣古坑鄉華山地區，受豪大雨侵襲而造成土石流災害。為防止災害及促進農村發展，政府部門投入數億元從事包含防災措施的風險管理與結合社區總體營造的社區發展計畫。本文以華山地區為例，利用問卷調查列舉出居民對土石流災害的認知及偏好，同時以 Likert 尺度、層級分析及多重屬性效用理論進行比較分析。研究結果發現，以多重屬性效用理論結合 Likert 量表來評估個人的認知與偏好，無論在理論基礎、問卷設計與田野調查方面，皆優於其他方法。

關鍵詞：土石流災害、層級分析、多重屬性效用理論。

An Analysis of Residents' Perception and Preference for Debris Flow Disaster—An Application of Multi-Attribute Utility Theory

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ABSTRACT After the 9-21 Earthquake, some areas such as Hua-Shan Village of Gu-Keng Township, Yunlin County, were more easily affected by debris flow after serious storms. To protect these areas and promote rural development, the government has designed risk management and community development plans, spending hundreds of millions of dollars. This paper uses Hua-Shan Village as an example to illustrate the process of perceiving and evaluating the factors affecting debris flow disasters. We analyze the differences of perception and preference among respondents by using Likert scales, analysis hierarchy process (AHP), and multi-attribute utility theory (MAUT). We then compare these three methods according to the theoretical basis, simplicity, and empirical results for each one. It is found that MAUT combined with Likert scales is better than other methods for evaluating the perceptions and preferences based on theoretical reasoning, questionnaire design and field survey.

Key Words: debris flow disaster, AHP, MAUT.

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