



A CONCEPTUAL FRAMEWORK TO REVIEW THE HAZARD MAPPING PROGRAM IN TAIWAN

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Taiwan started to delineate hazard zone according to the Soil and Water Conservation Act since 1996, which was in charged by Soil and Water Conservation Bureau (SWCB). During the pass years, SWCB had implemented only 59 projects of hazard zone, relatively a small amount, compared to the great number of endangered villages all around Taiwan. This is because people would like to have the disaster prevention works, but no hazard zone with strict land use regulation. Moreover, the ambiguous standard caused lots of controversy when authority determine where should be or should not be designated as hazard zone.

To identify this ambiguity, this research developed a conceptual framework $R_k = (H_r \times V_r) / (E_c + C_s)$, which was derived from concept of risk management, where H_r is the probability of specific nature hazard, V_r is the vulnerability of endangered resident or public services, E_c is the effectiveness of control measures, and C_s is the capability of social awareness of disaster. The advantage of this framework is each modularized component can be defined according to quantifiable data or ranking order collectively in Taiwan. It was also applied to check the 41 controversial hazard zone projects and found that only 2 projects should be carried out continually, 13 projects can be substituted by strengthened sediment control works, and 26 projects can be repealed immediately.