



## **A slope code system for evaluation and classification of slope**

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Although various evaluation and classification systems for slopes have been used to date, it is very difficult to determine the condition and characteristics of a slope and the consequence of failure from a result of evaluation and classification because most evaluation and classification systems yield scores or grades which represent only their geotechnical stability. In this research, a slope code system is suggested to represent the condition, characteristics and geotechnical stability of slope as well as the consequence of failure from a result of evaluation and classification.

A slope code system is composed of 5 elements, and each element has 4 or 5 codes which represent characteristics of that element. Element 1 represents material of the slopes which are classified as soil slope (S), rock slope (R), mixed slope (M) and complex slope (C). S, R, M and C are assigned to each slope. Element 2 indicates the genetic origin and geological structure in the slope and is classified as igneous rock, sedimentary rock, metamorphic rock and complex rock whose codes are assigned as I, S, M and C, respectively. Geological structures, such as fault, fold and so on, are represented as subscripts. Geotechnical stability is shown in Element 3 and evaluated using the Slope Mass Rating (SMR) method for rock slopes and Soil Mass Rating method for soil slopes. A, B, C, D and F are assigned depending on rating values. Probability of failure and remedial works done on the slope are represented in Element 4, and the same codes as in Elements 3 are used. Element 5 represents the consequence of failure, and A to F are assigned depending on magnitude and probability of hazard. One code is selected from each element, and the result of evaluation and classification of the slope is given as 5-codes system, such as RI4ABC. Because the condition, characteristics and geotechnical stability of a slope as well as consequence of failure are shown from a result of one evaluation and classification, this system will be used effectively in maintenance, management and decision-making for determining the priority of remedial measures.