

Proposal of Snowmelt Disaster Warning Criteria Using Effective Rainfall Index that Reflects Snowmelt

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In snow-covered areas, slope failures induced by snowmelt water may occur. In this study, we attempted to develop warning criteria for snowmelt disasters using the effective rainfall index, which reflects the analyzed snowmelt amount (hereinafter referred to as the effective snowmelt index), as an evaluation index. In this study, we verified the appropriate half-life of the effective snowmelt index by comparing it with the results of groundwater level observation in snow-covered areas. As a result, it was confirmed that a strong correlation between them was confirmed under the conditions that the half-life of the index was set to approximately 24 to 96 hours. In addition, through case studies, we found that the warning criteria using the effective snowmelt index and snow depth as evaluation indexes could effectively warn of snowmelt disasters.