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## The understanding of geological terrain mapping among stakeholders for a highland development in Malaysia

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**Abstract:** The occurrence of landslides on slopes has posed a serious risk on areas of development in Malaysia for the past decades. In response to such geohazards, the Geological Terrain Mapping (GTM) method was adapted in a hilly & highland development. The four attributes for a Geological Terrain Classification make it easier to identify the area that are prone to geohazard. The introduction of this system in 2009 serves as guidance towards sustainable development planning and disaster risk reduction in the country. GTM is also considered as one of the effort in meeting the requirement of Sustainable Development Goals (SDGs) for vision 2050. Despite its establishment, landslide disasters in highland developments still kept increasing. Therefore, this study aims to determine the current level of awareness and understanding regarding GTM. Specifically, the awareness of the major key players in development: the stakeholders. To test the hypothesis that there is a lack of awareness regarding GTM among developers in Malaysia, an online survey was distributed to stakeholders in the development industry across Malaysia. 42 respondents from both government and private sectors with difference profession were asked to respond to sets of questions covering highland development guidelines, GTM, sustainability, and disaster risk reduction (DRR). Analysis of local landslide study cases using the S.W.O.T and P.E.S.T.E.L was also carried out to understand the implications that geohazards have on sustainability. The results showed that more than half of the respondents knew the existence of GTM. Despite knowing the existence of GTM, the stakeholders do not completely understand the uses of GTM. Other than that, they do not understand the importance of the system in sustainability and disaster risk reduction. Based on the questionnaire, nearly half of the respondent holds a less knowledge about the SDGs and DRR. This disparity suggests the lack of actual understanding regarding GTM among stakeholders in the country as well as its vital role in sustainability and risk control. The questionnaire also seek the opinion of the public for suitable approach that should be implemented to ensure the GTM is fully understand by the all the stakeholders in Malaysia.

**Keywords:** Geological Terrain Mapping (GTM), Sustainable Development Goals (SDGs), Disaster Risk Reduction (DRR)