# Risk Evaluation Triangle (RET) For Landslide Risk Management (LRM): A Case Study from Kota Kinabalu, Sabah, Malaysia

## ABSTRACT

Landslide Risk Evaluation (LREv) is a decision-making process for Landslide Risk Analysis (LRAn) results. This process determines whether the inherent risks are acceptable, tolerant, unacceptable or a detailed studies is required. LREv also involves consideration of risk perceptions, risk communication and risk comparisons aimed at developing appropriate steps or level of response. Part of the LREv procedure is to assess the risk acceptance criteria. To achieve this goal, the F-N curve is used. The F-N curve relates to an annual probability that may cause n or more fatalities (F) to the total fatalities (N). The F-N curve is a complementary cumulative distribution function and provides statistical observations for all levels in offsetting a risk. However, the results of the LREv study on the previous F-N curves indicate that there is a constraint in the context of continuity of the proposed method or extension for the appropriate Landslide Risk Management (LRM) approach. Therefore, to overcome this shortcoming, a diagram known as the "Risk Evaluation Triangle (RET)" was introduced. RET basically aims to assess the level of Risk Tolerance Index (RTI) quantitatively. The parameters involved are Landslide Hazard Analysis (LHAn) and fatalities estimation. RTI levels are classified from very low ( 0.81) and follow-up detailed description are given. Hence, these RET outcomes are expected to serve as a continuation of the advanced method or approach in uniform LREv which has a coordination principle that can be developed for LRM purposes.