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Validation of a neural network model using cross application approaches

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This paper discusses an important component of landslide susceptibility mapping using back-propagation based artificial neural network model and its cross application of weights at three study areas in Malaysia, using a Geographic Information System (GIS). Landslide locations were identified in the study areas from the interpretation of aerial photographs, field surveys and inventory reports. Landslide related spatial database was constructed from topographic, soil, geology, landcover maps. The paper further examines the factors affecting landslide for assessing landslide susceptibility mapping and reviews tools for quantifying the likelihood of occurrence of the scenarios. Different training sites were selected randomly to train the neural network and nine sets of landslide susceptibility maps were prepared. The paper then illustrates the validation of those maps using Area Under Curve (AUC) model.