

ABSTRACT

UTILIZATION OF LANDSAT 8 OLI IMAGERY AND SIG IN MAPPING LANDSLIDE PRONE AREAS IN WAY TENONG DISTRICT WEST LAMPUNG REGENCY

By

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Way Tenong District is located in West Lampung Regency with an area of $\pm 11,700$ Ha, with relatively unstable soil types and undulating and hilly terrain, making Way Tenong District prone to threats from soil activity such as landslides. In 2022 there was a landslide in Way Tenong District which caused damage and even claimed lives. Seeing this situation, a series is needed to determine the points that have the potential to experience landslides and the most dominant factors for landslides in Way Tenong District, which is called mapping using a Geographic Information System (GIS).) and Landsat Imagery. The method used in this study is the overlay method (Intersect) with six parameters, namely slope, soil type. In this study the scores for each class of parameters were added up using a field calculator on attributes, resulting in landslide intervals which were divided into five landslide hazard classes, namely non-prone, low vulnerability, moderate vulnerability, high-risk and very vulnerable. . From the results of the study it is known that Way Tenong District has five classes of landslide vulnerability, namely the non-prone class covering an area of 2,434 Ha or 20.97%, the low vulnerability area of 3,224 Ha or 27.64%, the moderate vulnerability area of 3,616 Ha or 31.10%, the vulnerable area of 1,556 Ha or 13.38 Ha, and a very vulnerable area of 804 Ha or 6.91%, and information was obtained that the most dominant parameter was the rainfall parameter with the highest total score reaching 1,560.

Keywords : Mapping, Geographic Information System (GIS), Overlay, Landsat Imagery