

## Analysis of Tectonic Influence on Morphological Formation: Case Study of Gapura Pemalang Area

<b>Title</b>	Analysis of Tectonic Influence on Morphological Formation: Case Study of Gapura Pemalang Area
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<b>Abstract</b>	Tectonic activity is closely related to the formation of landforms (morphology) in a region. The study area exhibits morphology controlled by normal fault tectonics, with blocks consisting of highlands and lowlands. This study aims to determine the extent of tectonic influence (normal faulting) on the morphology in the location. The quantitative geomorphological analysis method is used to obtain data on the level of tectonic activity present in the research area. Based on this method, it causes the formation of morphology and geological structures that affect the current surface forms. The methods used to calculate the tectonic influence are the Ratio of Valley Floor Width to Valley Height (Vf) and Mountain Front Sinuosity (Smf). Based on the results of the case study, the average Vf is 0.19, indicating class one tectonic activity and a high uplift level with V-shaped valleys. Meanwhile, the average Smf is 1.45, indicating strong tectonic activity associated with wide plains, narrow valleys, and steep hills. Based on these results, the study location falls into the category of strong tectonic activity, supported by field geological data showing right-lateral strike-slip faults and left-lateral normal faults intersecting each other.
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<b>Author</b>	FX ANJAR TRI LAKSONO, S.T, M.Sc.