ASSESSMENT OF LAND DAMAGE DUE TO SAND MINING IN PENGALUSAN VILLAGE, MREBET SUB-DISTRICT, PURBALINGGA DISTRICT

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ABSTRACT

Sand mining activities in Pengalusan Village, Mrebet Subdistrict, Purbalingga Regency are carried out without proper planning or rehabilitation strategies. This has led to land degradation, such as changes in land surface shape, loss of topsoil, and decreased soil fertility. This study aims to assess the level of land degradation caused by sand mining using field surveys and scoring assessments based on physical parameters, in accordance with the Decree of the Minister of Environment No. 43 of 1996. Sampling was conducted at six points selected through purposive sampling based on the duration of mining activities. The parameters observed include pit edge boundaries, pit floor relief, slope and height of excavation walls, topsoil replacement, and vegetation cover. Each parameter was scored from 1 to 3. The scoring results indicated that three points were classified as moderately damaged while three points were classified as heavily damaged. Overall, 50% of the observation points experienced moderate damage, while 50% experienced heavy damage. Based on these results, land rehabilitation efforts are recommended, such as constructing bench terraces, building drainage channels, and replanting using local vegetation like silk tree, jackfruit, and vetiver grass to restore the land's function.

Keywords: land degradation, sand mining, scoring analysis, purposive sampling.