Abstrak

PT. Harmak Indonesia is one of the andesite stone Mining Business Permit (IUP) in Celapar III Hamlet, Hargowilis Village, Kokap District, Kulon Progo Regency. which has a Mining Business Permit Area of 21.5 Ha. Andesite mining by open pit produces top soil and overburden from the stripping process. Plans on post-mining PT. Harmak Indonesia is a former mining land returned to function as a settlement and agricultural fields.

Therefore, the presence of top soil and overburden is very important. The thing that can be a problem for top soil and overburden is erosion because at PT. Harmak Indonesia has not been specifically handled of top soil and overburden deposits. In this study the authors wanted to calculate the amount of eroded material and classify the erosion class and analyze any factors that influence the rate of erosion at that location. The method used to estimate the erosion rate in this study uses the Universal Soil Loss Equation (USLE) method. The influential factors in the USLE method are soil erodibity (K), rain erosivity (R), slope and slope length (LS), soil management (P), and crop management (C). After obtaining factors that influence the rate of erosion, the author can recommend ways to reduce the rate of erosion.

Based on the analysis of primary and secondary data obtained, at the study site the calculation of the estimated erosion rate that occurred was 450 tons / ha / year and was included in the classification of heavyweight erosion according to Decree of the Directorate General of Reforestation and Rehabilitation of the Ministry of Forestry No. 041 / Kpts / V / 1998. Erosion that occurs is also an erosion in the form of groove erosion. The most influential factors are land management (P) and crop management (C). Then the recommendation given is to change these factors by making the pile moved to the disposal area and then making a traditional terrace with angular dimensions of single slope 230, single slope height of 3 meters, width of 5 meters, overall slope 140 with height of 25 as land management and then planting it with legume plants. From these recommendations, a drastic reduction in estimation of erosion rates was obtained from 232 tons / ha / year, equivalent to 93 m3 of land / year to 8 tons / ha / year, equivalent to 3.2 m3 of soil / year and classified in normal erosion classes.