

ABSTRACT

Erosion is the movement of soil or part of the soil from one place to another by natural, namely water and wind, thereby causing the loss of fertile soil layers for plant growth and the reduced ability of the soil to absorb and hold water. This research aims to calculate the amount of erosion and compare the erosion prediction between the Universal Soil Loss Equation (USLE) and Revised Universal Soil Loss Equation (RUSLE) methods in Bireuen Regency Sub-Watershed. The LMU observed in the sub-watershed krueng peusangan hilir have a higher erosion prediction value than the tolerance erosion value, with the exception of the LMU 16. Therefore, other than LMU 16 conservation measures must be taken. The highest erosion prediction in the USLE and RUSLE method is found in the Land Mapping Unit (LMU) 12 with a value of 1369,83 tonnes / ha / year (USLE) and 637,93 tonnes / ha / year (RUSLE), while the lowest was found in LMU 16 with a value of 17,16 tonnes / ha / year (USLE) and 17,16 tonnes / ha / year (RUSLE). The results showed that the amount of erosion using the USLE method was 13.131.725,9 tonnes / year with an erosion rate of 451,72 tonnes / ha / year, whereas the amount of erosion using the RUSLE method was 6.109.689,8 tonnes / year with an erosion rate of 208,66 tonnes / ha / year. The ratio of erosion prediction of USLE to RUSLE is 1: 0.46. Thus, it is necessary to take conservation actions such as planting legumes, mulching, and terracing legumes combination.

Keywords : Erosion, USLE, RUSLE, Land Mapping Unit (LMU)