

## **ABSTRACT**

*Erosion and Sedimentation cause a decrease in the water demand function of the Sampean River due to land use that does not consider aspects of the function of the river, causing complicated problems and not only reducing the function of water needs but also causing land subsidence in the Sampean Hulu watershed. Therefore, the research was carried out "Erosion and Sedimentation Analysis in the Upstream Sampean Watershed Using the USLE Method Based on Geographic Information Systems (ArcGis)" while the aspect to be studied was Erosion using the Universal Soil Loss Equation (USLE) method, to determine the Sediment Delivery Ratio method (SDR) using the value of the watershed area. The results obtained from the erosion value are 39,617 tons/ha per year, the results of the Sediment Delivery Ratio (SDR) using the watershed area parameter of 0.163 km<sup>2</sup> and from the results of the erosion and sediment values obtained the value of the sediment load is 6,458 tons/ha per year. The total value of the sediment load is 255,847 tons per year.*

**Keywords:** *Erosion, Sediment, SDR, USLE.*