

# REMOTE SENSING FOR SUSPENDED SEDIMENT (CASE STUDY PORONG RIVER)

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**Abstract:** Porong river is a branch of Brantas river which limits between Sidoarjo and Pasuruan. Since occurrence of overflow of hot mud in Sidoarjo, Porong River has role of drain of sediment into the Madura Strait. In this paper will be discussed on the concentration of suspended sediment in the River Porong using remote sensing methods. Sedimentation that can be observed by remote sensing method is suspended sediment. Determination of suspended sediment by changing the value of radians into reflectance values, then developed a variety of algorithms to determine the value of the suspended sediment. Data used is a medium-resolution satellite image data, the ASTER image of 2005 to 2008. As for the algorithm used is algorithm Budiman (2004). From the data processing and analysis of suspended sediments obtained in Porong River estuary in 2005 were dominated by sediment class 50-100 mg/l, in 2006 were dominated by sedimentary 100-150 mg/l, while in 2007 and 2008 were dominated by class of > 200 mg/l. Thus, the flow of sediment into the river Porong greatly affect the quality and quantity of water and environment in Porong River.

**Keyword :** Porong River, Suspended Sediment, Remote Sensing, Algorithm Budiman