

# EVALUATION OF MULTITEMPORAL LANDSAT SATELLITE IMAGES TO IDENTIFY TOTAL SUSPENDED SOLID (TSS) ALTERATION IN SAGULING RESERVOIR, WEST BANDUNG

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**Abstract:** Mud sludge eroded due to the destruction of water catchment area in the upper stream and the accumulation of untreated household waste resulting in sedimentation problem at Citarum River, including the Saguling Reservoir which acts as water infrastructure network system. Remote sensing technology, especially Landsat, is very functional in monitoring Total Suspended Solid (TSS) value, however the very dynamic water causing the algorithm used still localized. This study is using 5 selected algorithms where the measurement value will be compared with the results of the in-situ measurement in the field, then the best algorithm is used to calculate the TSS value changes of Saguling Reservoir in 2005 and 2009. From this comparison, the algorithm obtained by Hashim irradiance using reflectance values (R(0-)) of the red band as the input data is the best data for the approximate value of the in-situ measurements of TSS in 4 point observation stations, which there's an increase of 20 mg/l for Saguling area. Study showed the alternative measure in developing a new algorithm to extract the water quality in Indonesia water area.

Keywords : Total Suspended Solid (TSS), remote sensing data, Saguling Reservoir.