

**ANALISIS KESEIMBANGAN DAN MIGRASI SEDIMEN
DI SEPANJANG KALI PABELAN
KABUPATEN MAGELANG**

S u g e n g

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telah dipertahankan di depan Dewan Penguji
pada tanggal 19 Maret 2003

Pembimbing Utama

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ABSTRACT

Wulan River is the downstream part of Serang River from Wilalung Flood Control gate of Wilalung Village, District of Undaan, Kudus Regency, to Java Ocean. Around the year of 1892, the river bank condition, which is at the same level with surrounding land/rice field for approximately 80 years, has changed that Wulan River bank is now at 3 meters above the surrounding land/rice field level. The discharge capacity of Wulan River has decreased from 840 m³/second to 630 m³/second. The question is about the causing factor, whether the sedimen level is high or the river maintenance is inappropriate.

For understanding this phenomenon, it is necessary to analyze the sediment transport and the sedimen balance. This is done by using the HEC-6 program.

The result shows that agradation level at low water is 71992 m³/year, while the degradation level is 34491 m³/year. During flood, the agradation level is 89667 m³/day, and the degradation level is 31113 m³/day. Using clean water assumption, the agradation level at low water is 73131 m³/year, and the degradation level is 37063 m³/year. During flood, the clean water assumption results in the agradation level of 33661 m³/day, and the degradation level of 16574 m³/day.

Keyword: river discharge, sediment, sediment transportation.