

## Distributed hydrological model simulation on the diurnal-cycle of Ciliwung River basin

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A systematic diurnal-cycle of water level is persistently generated over Ciliwung River basin during the Intensive Observational Period of HARIMAU2010 (15 January to 15 February 2010). It is almost uniquely explained by diurnal-cycle of rainfall observed with weather radar (C-band Doppler Radar) over Jakarta and surrounding area.

In this study, we have shown a simulation of the diurnal cycle of Ciliwung River water level by distributed hydrological model (the CDRMV3 model). Using the CDR rainfall data, river discharge is simulated both for short period and one-month period in two station, i.e. Manggarai (downstream outlet) and Katulampa (upstream outlet), and verified by comparing with the observation discharge from those two station.

Further improvement of the simulation scheme for the diurnal-cycle rainfall is also discussed.

Keywords: Diurnal-cycle, Weather radar, Distributed hydrological model, Rainfall, Runoff