

# **Characteristics of Rainfall Extremes over Jakarta and an Approach of Flood Monitoring using Weather Radar Data and River Discharge of Ciliwung River**

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Abstract Jakarta as the megapolitan city of Indonesia are prone to flood occurred mostly every year with more devastated disaster impact on infrastructure damage and deaths. The flood has become one of the most priority programs to the local government, especially for Jakarta and surrounding regions there were several projects nationally and international have been conducted, however the flood monitoring programs did not reach at the level that help much people ready with this prominent disaster. Most the projects partially involve with hidrological approach rather than comprehensively put into consideration of hydrometeorological parameters with the focus more on understanding variations in term of intensity and frequency of rainfall over complex topography caused strong localities and less spatial and temporal input data induced into hidrological model for flood monitoring. BPPT are concern to deal with an effort to establish flood early warning system for Jakarta and surroundings with an approach to firstly understand the localities and take finer resolution utilized weather radar data and river discharge of the Ciliwung river for the input of the non-hidrological model applied in our project. In order to do that, we will examine local characteristic of rainfall extremes under regime climate and seasonal dependence of rainfall extreme over Jakarta and how they change with topography using C-band Doppler radar that had been operated in Puspiptek, Serpong under HARIMAU program during Januairy 2009 – December 2012 (4 years). We are going to present those results as well as introduce the conceptual design of our flood early warning system in the Jakarta and surrounding regions with special emphasis only for Ciliwung catchment area.