

## Assessment of GSMaP satellite rainfall products in Asian monsoon region

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Satellite rainfall products provide the spatial and temporal distribution of rainfall estimates over the ungauged regions where no ground-based measurements with rain gauges and/or meteorological radars are available. For the regions, the satellite products have special importance in, for example, hydrological and agricultural applications such as flood forecasting/warning and water resources management. The Global Satellite Mapping of Precipitation (GSMaP) products have high resolution in space and time (0.1 deg. and 1 h); besides the near-real-time version of GSMaP opens to the public within four hours after measurements. They are thus highly expected to be in operational use in many countries and regions. There are the problems in accuracy and precision of the products due to the limitations on measuring principles, time intervals of sampling and others. However, the above-mentioned strengths of the products are considerable. Therefore, the performance of the GSMaP products needs to be investigated in various areas for the appropriate and effective use; moreover, through the investigation, it can be expected that the knowledge useful for improving the performance will be obtained. The present study investigates the performance of two GSMaP products, GSMaP\_MVK and GSMaP\_Gauge (a gauge-adjusted GSMaP\_MVK), in the four river basins located from the tropics to mid-latitudes in the Asian monsoon region, including: the Solo Basin (16,100 km<sup>2</sup>) in Jawa, Indonesia; the Thu Bon – Vu Gia Basin (10,350 km<sup>2</sup>) in central Vietnam; the Pampanga Basin (9,759 km<sup>2</sup>) in Luzon, the Philippines; and the Tone Basin (16,840 km<sup>2</sup>), Japan. The study is ongoing and intermediate results mainly for the Solo and Thu Bon – Vu Gia river basins are discussed at this session.

Keywords: Asian monsoon, precipitation, satellite