

EOAM project, a): Remote Sensing based Hydro-Meteorological Data Assimilation in the Hydrological and Weather Forecasting Models, 2012-2015

a) Overall approach

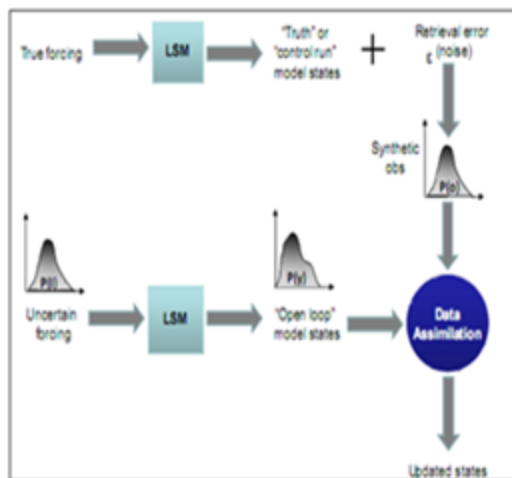


Fig. 2a: Observing System Simulation Experiment

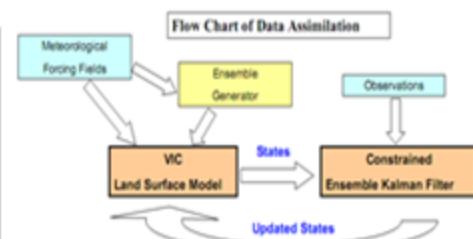
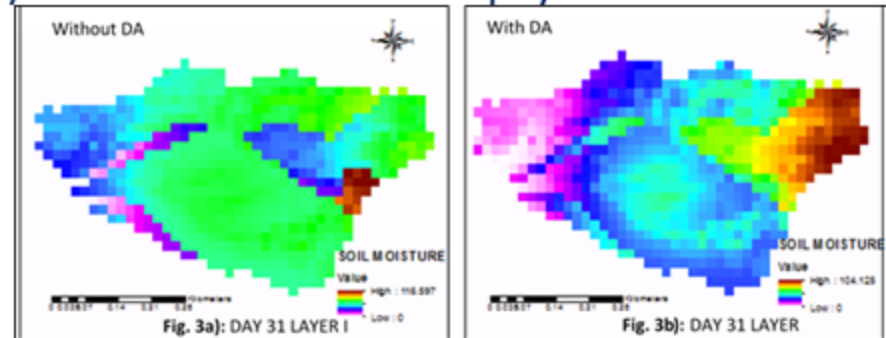


Fig. 2b: VIC with DA

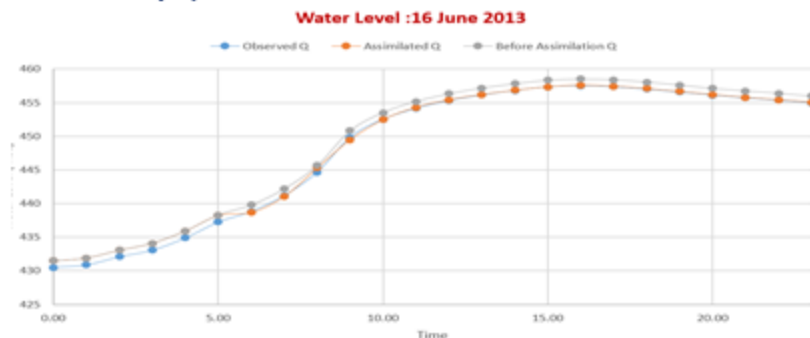


Fig. 2c: WRF-DA in WRF modeling

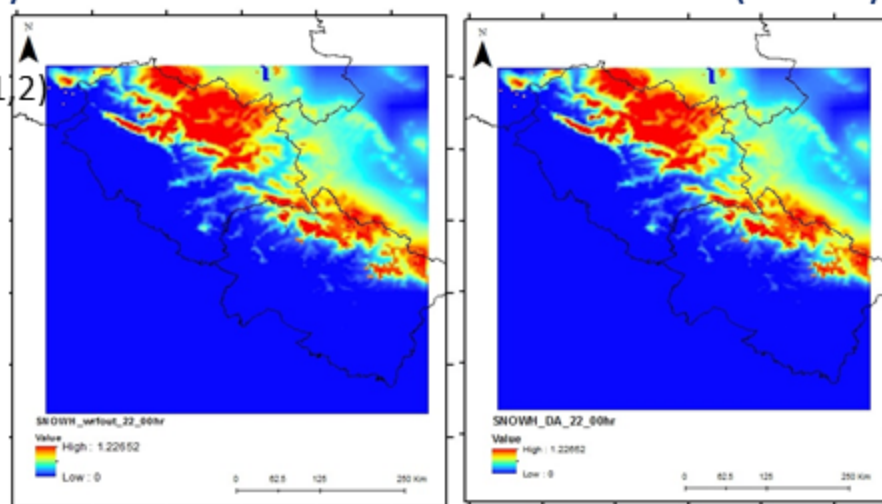
a) Soil moisture assimilation in VIC top layer soil in Asan watershed



b) Water level/Q assimilation in HD model for NRT flood modeling



c) SNOWH before and after assimilation at 22-Jan-2015 (00th hour)



WRF 3DVAR OBSERVATIONS ASSIMILATED

- **Satellite Radiances (using Radiative Transfer models CRTM and RTTOV)**

- HIRS (from NOAA-16, 17, 18, 19 and METOP-2)
- AMSU-A (from NOAA-15, 16, 18, 19, EOS-Aqua and METOP-1,2)
- AMSU-B (from NOAA-15, 16, 17)
- MHS (from NOAA-18, 19 and METOP-1,2)
- AIRS (from EOS-Aqua)
- SSMIS (from DMSP-16)
- ATMS (from NPP)
- MWTS and MWHS (from FY3)
- IASI (from METOP-1,2)
- SEVIRI (from Meteosat)
- INSAT 3D (in progress with help of SAC Ahmedabad)