

Major Research Activities at NCMRWF

At NCMRWF various research activities are being undertaken on the following topics. (Kindly see the publications link).

Observation processing and Variational Data Assimilation

Assimilation of new types of various non-conventional and new upcoming satellite datasets.

Global numerical weather prediction model development, science upgradations and sensitivity studies

Regional numerical weather prediction model development, science upgradations and sensitivity studies

Very high resolution, convective scale modeling and parameterization developments

Development of High Resolution Rapid Refreshing (HRRR) limited area prediction systems

Development of various model applications and Severe Weather parameters

Observing System Experiments and Forecast Sensitivity studies

Derivation of products from Radar for the verification and assimilation in very high resolution models

Development of rainfall products from satellites for model comparisons

Case studies of the severe weather events and process studies

Verification and evaluation of operational model upgradations

Generation of model statistics (monthly/seasonal) and model intercomparisons

Generation/collection and processing of special datasets and ancillaries for the earth system model development

Development of ensemble prediction systems, science upgradations and its evaluation

Bias-correction, process-oriented model validations and model forecast calibration for various forecasting applications

Development and science upgradations of ocean data assimilation and coupled data assimilation systems

Development and upgradations of extended range and S2S prediction systems

Assessment of the skill and the performance and the error growth and predictability in the extended range and S2S prediction systems

Development of regional coupled modeling systems

Development of high-resolution global coupled modeling systems