

Tropical cyclone Aila and its impact over Southwestern part of Bangladesh

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Abstract

Cyclone is one of the most catastrophic hydro-meteorological disasters that has huge impact on the countries bordering Bay of Bengal, in particular Bangladesh, India and Myanmar. Bay of Bengal is a potentially energetic region for the development of cyclonic storm, accounting for about 5% of the global number of tropical storm. Major threat of life and property of people is due to very heavy rainfall, high wind and flooding due to surge from land falling tropical cyclone organized over Bay of Bengal. On 25 May cyclone Aila struck of the southwest coast of Bangladesh. Rainfall and flooding associated with Aila examined in this study that affected southwest part of Bangladesh. Due to very heavy rainfall and surge Bangladesh experiences flooding affect which brought long term sufferings for the southwestern people of Bangladesh. Mesoscale convection and moisture from Bay of Bengal combined to produce heavy rainfall and surge. It is seen from the observation, the special feature of the cyclone Aila is, its northerly movement throughout its life period and its rapid intensification just prior to landfall. In this present study Advanced Research WRF(ARW) model with horizontal resolution of 20km X 20km, utilizes the initial and boundary condition obtained from Final Reanalysis(FNL) data of National Centers of Environmental Prediction(NCEP), USA were used to simulate Aila. Model results are also compared with TRMM data and observation in order to evaluate the model performance.