GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 2403
TO BE ANSWERED ON THURSDAY, MARCH 23, 2017

PARTNERSHIP WITH US WEATHER AGENCY

2403. SHRI C.M. RAMESH:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether it is a fact that US weather agency, the National Centers for Environment Prediction wanted to partner with Indian Meteorological Department (IMD) in medium and long range weather forecasting;
(b) if so, the details of proposed partnership with US;
(c) to what extent this benefits IMD; and
(d) how India is rated among the developed countries of the world with regard to weather forecasting, quality of system and information to the end-users?

ANSWER
MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a) Yes Sir.
(b) Under Ministry of Earth Sciences-National Oceanic and Atmospheric Administration, USA (MoES-NOAA) collaboration, improved framework of forecast models were adopted and after due performance evaluation and associated fine tuning of modelling frameworks, global forecast system was implemented in 2014. Through Indo-US collaboration, a “Monsoon Desk” has been set up for working jointly for improving seasonal forecast of Indian monsoon rainfall. Through this forum, Indian and US Scientists are exchanging their ideas and sharing their expertise. This effort has led to appreciable improvements in the efficiency of models in making better forecasts.
(c) Under this collaboration, an improved suite of prediction models has been implemented operationally at India Meteorological Department (IMD) for enhanced weather forecasting capability through assimilation of all available global satellite radiance data for production of forecast products at 22km grid globally and 9km/3km grid over India/regional/mega city domains. A coupled model has been developed, implemented and operationalized in July 2016 for generating operational Extended Range/Seasonal Forecast products for different users. A 20 member Ensemble Prediction System has also been implemented to generate probabilistic forecasts.

(d) A high resolution global deterministic weather prediction model has been commissioned for generating operational weather forecasts at a horizontal resolution of 12km. With this, MoES has attained the same capability as in USA in using high resolution weather prediction models. The forecast skill of this model is comparable with other major Global Numerical Weather Prediction Centres. Noteworthy improvement was made in track and intensity forecast of tropical cyclones (24 hour forecast error in track prediction reduced from 141 km to 97 km and Landfall error from 99 km to 56 km during 2006 to 2016). Accurate forecasts of recent cyclones, Phailin, HudHud and Vardah saved thousands of human lives. Noticeable improvements achieved in skills of Heavy Rainfall Forecasts (False Alarm Rate reduced from 46% to 11% and Probability of Detection increased from 49% to 67% from 2002 to 2016).

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