GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:254
ANSWERED ON:22.07.2015
Weather Forecasting
Kachhadia Shri Naranbhai;Mahato Shri Bidyut Baran

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the Government proposes to extend the weather forecasting and monsoon modelling services to neighbouring countries such as Nepal, Sri Lanka etc.;

(b) if so, whether Indian Meteorological Department is fully equipped with required equipments; and

(c) if so, the details thereof?

Answer

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

(a) Yes Madam. Earth System Science Organization (ESSO)-Institutions are already providing specific weather and climate information and forecast products/services under various technical cooperation umbrellas to neighbouring countries including Nepal, Sri Lanka etc. Computational domain of various assimilation-forecast models cover India and all neighboring countries adjoin Bay of Bengal and Arabian Sea including SAARC Countries (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka)

(b) Yes Madam.

(c) Operational forecasts for the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) comprising Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, Thailand; Regional Integrated Multi-Hazard Early Warning Systems (RIMES) member countries are provided regularly.

India as a Regional Specialized Meteorological Centre of World Meteorological Organization (WMO) is also providing weather guidance with respect to tropical cyclones for the WMO/ESCAP Panel countries namely India, Pakistan, Bangladesh, Myanmar, Oman, Maldives, Sri Lanka and Thailand.

South Asian Climate Outlook Forum (SASCOF) established under the aegis of the WMO is serving for the consensus generation of monsoon season rainfall forecast assessment considering all the forecast inputs from all available global sources including India. Starting from 2010, first three sessions of the SASCOF were held at Pune, India and its 4th session was held in 2013 at Kathmandu, Nepal. The fifth session of SASCOF was held last year (2014) again at Pune, India and SASCOF-6 for 2015 was held in Bangladesh.

Global and Regional/Meso scale assimilation-forecast models used for short (up to 3-days), medium (3-10 days) and extended (beyond 10-days) range forecasts are customized and evaluated for their improved performance evaluation at the ESSO-National Centre for Medium Range Weather Forecasting (NCMRWF) and coupled ocean-atmospheric climate models used for fortnightly (15-days), monthly and seasonal scale rainfall forecasts are developed and evaluated for their improved performance evaluation at the ESSO-Indian Institute of Tropical Meteorology (IITM), Pune. ESSO-India Meteorological Department (IMD) implements all of those fully tested and evaluated assimilation-forecast model frameworks to operationally generate variety of real-time numerical weather prediction products for improved weather, climate and severe weather warning services.

As of now, across the ESSO institutions, the Government of India has commissioned 1.1 Petaflops of high performance computing (HPC) power in support of development of various atmosphere, ocean and coupled models and associated operational forecast requirements. Currently, ESSO-IMD operate real-time Global Forecast System (GFS) with 23 km horizontal resolution and high resolution meso-scale forecast system WRF (Weather Research and Forecasting) with 9 km and 3 km horizontal resolutions for the forecast up to 3 days.

Improvement of weather monitoring and observing systems network and associated forecasting services is a continuous process. Based on such emerging requirements, Government takes up comprehensive programme for upgradation of (i) observation systems (ii) advanced data assimilation tools (iii) advanced communication and IT infrastructure (iv) high performance computing systems and (v) intensive/sophisticated training of personnel to facilitate the implementation of advanced global/regional/ meso-scale prediction models for improving the accuracy of weather forecasts in all temporal and spatial scales and for quick dissemination of weather forecast assessments/warnings to the users.