GOVERNMENT OF INDIA
SCIENCE AND TECHNOLOGY
LOK SABHA

STARRED QUESTION NO:288
ANSWERED ON:10.03.2006
WEATHER FORECASTING
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Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the progress made by the country to achieve global standards in the field of weather forecasting; and

(b) the assistance provided by the Government of India to the Meteorological Department in achieving this standard?

Answer

MINISTER OF SCIENCE & TECHNOLOGY AND MINISTER OF OCEAN DEVELOPMENT (KAPIL SIBAL)

(a) to (b) : A statement is laid on the Table of the House.

STATEMENT AS REFERRED IN REPLY TO PARTS (a) to (b) OF LOK SABHA STARRED QUESTION NO. 288 FOR 10.3.2006 REGARDING "WEATHER FORECASTING".

Countries which are at the forefront of weather forecasting have a dense network of observation systems, high computing capacity and therefore are able to run sophisticated numerical weather prediction models of very high resolution. They have the capability of ingesting non-conventional data from observational platforms like satellites, Doppler Weather Radar, buoys, aircraft etc. which are now available round the clock. Their facilities enable them to effectively monitor high impact weather events which occur in small space and time domains.

India Meteorological Department (IMD) has a mandate to issue short-range forecasts (validity of 2-3 days) and long range seasonal forecast. National Centre for Medium Range Weather Forecasting (NCMRWF) has the mandate for medium range (validity 4-10 days) forecasting. Many of the Numerical Models such as the Limited Area Model (LAM) and 5th Generation Meso Scale Model (MM5) are being used for short range weather forecasts. IMD's long range forecast is based on statistical model that uses a number of global parameters called predictors which have high correlation with monsoon rainfall. At present, IMD uses 8 to 10 parameter models for long range forecast. In view of potential of numerical models, IMD has adopted an experimental prediction system based on numerical models. For this purpose, IMD under a collaborative research programme with Indian Institute of Science, Bangalore has adopted a numerical model developed at the Experimental Climate Prediction Ce ntre (ECPC), Scripps Institute of Oceanography, USA.

The model resolution and the accuracy has limitation vis-Ã -vis the more advanced countries because of the inadequate infrastructure such as observational network, computing capacity and human resources. Upgradation of observational network, enhancement of computing facility for running high resolution numerical weather prediction models and improvement of communication network are required to meet the present requirements and to achieve global standards in weather forecasting. Plan schemes through annual budget and five year plans of IMD seek to achieve the above objective. IMD has continuously endeavored to keep pace with the modern advancements with resources made available through the budget grants of the Government under plan schemes. Government grant for Plan Budget outlays to IMD for the 8th, 9th and 10th Five Year Plans were Rupees 130 crores, Repees 254 crores and Rupees 309 crores respectively.