

**GOVERNMENT OF INDIA  
MINISTRY OF EARTH SCIENCES  
LOK SABHA  
UNSTARRED QUESTION No. 80  
TO BE ANSWERED ON WEDNESDAY, NOVEMBER 16, 2016**

**ACCURATE WEATHER FORECAST**

**80. DR. SWAMI SAKSHIJI MAHARAJ:  
SHRI ASHWINI KUMAR CHOUBEY:**

**Will the Minister of EARTH SCIENCES be pleased to state:**

- (a) whether the Indian Meteorological Department (IMD) providing forecast and consultancy services block level in the country including it Uttar Pradesh;**
- (b) if so, the details for the last three years thereof;**
- (c) the details of the efforts made to forecast real time weather;**
- (d) whether any technological assistance has been sought from foreign countries and/or studies undertaken in this regard and if so, the details thereof; and**
- (e) the efforts made by the Government to introduce such technologies in the country?**

**ANSWER**

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

- (a-b) Madam, at present, India Meteorological Department (IMD) is providing forecast for formulating agro-meteorological advisory services at the district level. However research efforts are initiated to explore possibility of generating sub district (block level) scale agro-meteorological forecast with acceptable level of skill in a pilot mode. The weather forecast and Agro-meteorological advisories at district level for last 3 years were provided to the farmer through the network of 130 Agro-Meteorological Field Units located in state agricultural universities, Indian Council of Agricultural Research (ICAR) centres and Indian Institute of Technology (IIT) on every Tuesday and Friday, twice a week. At present, 19.51 million farmers are directly subscribing and have benefitted by Agro-Meteorological Advisories in SMS and IVRS free of cost. The Status of Dissemination of Agro-advisories for October 2016 is given in Annexure-I**
- (c) At present district level weather forecast is generated for the next five days by India Meteorological Department (IMD) and based on that Agromet Advisories are prepared and communicated to the farming community in the country.**

**Crop specific advisories under Gramin Krishi Mausam Seva (GKMS) of IMD through Agriculture Field Monitoring Unit (AFMU) are rendered twice a week in collaboration with State Agricultural Universities (SAUs), institutions of Indian Council of Agricultural Research (ICAR), IITs etc. Such advisories are formulated based on district level weather forecast for next 5-days in respect of:**

- **Rainfall**
  - **maximum temperature, minimum temperature**
  - **wind speed, wind direction**
  - **relative humidity and cloud/Cover**
  - **weekly cumulative rainfall forecast**
  - **Weather forecast based agro meteorological advisories**
- are disseminated in vernacular language through Kisan portal launched by the Ministry of Agriculture and also under public private partnership.**

**(d-e) Under Ministry of Earth Sciences-National Oceanic and Atmospheric Administration, USA (MoES-NOAA) collaboration, the improved framework of forecast models were adapted and after due performance evaluation and associated fine tuning of the modeling frameworks, global forecast system was implemented in 2014. Accordingly, model has demonstrated improved forecast skills.**

**Operational implementation of improved suite of prediction models has enhanced the weather forecasting capability through assimilation of all available global satellite radiance data for the production of forecast products at 22km grid globally and 9km/3km grid over India/regional/mega city domains.**

**This became possible after commissioning of High Performance Computing (HPC) System across the institutions of MoES for expanding the various forecast models implementation for weather climate and ocean state forecast. Currently 1.2 petaflops scale HPC is functional so as to support development / testing of next generation suit of models for various weather sensitive applications.**

## Annexure-I

<b>Status of Dissemination of Agrometeorological Advisories for October 2016</b>								
<b>State</b>	<b>IFFCO</b>	<b>NOKIA</b>	<b>Reuter</b>	<b>Handygo</b>	<b>Reliance Foundation</b>	<b>Kisan Sanchar</b>	<b>Mahindra &amp; Mahindra</b>	<b>State Total</b>
<b>Uttar Pradesh</b>	<b>516755</b>	<b>105600</b>	<b>41148</b>	<b>4409</b>		<b>5963</b>		<b>673875</b>
<b>Uttarakhand</b>			<b>150</b>			<b>52</b>		<b>202</b>
<b>Odisha</b>	<b>406024</b>	<b>84</b>	<b>1</b>		<b>180436</b>			<b>586545</b>
<b>Madhya Pradesh</b>	<b>52027</b>	<b>9243</b>	<b>42048</b>	<b>3411</b>	<b>137198</b>	<b>3415</b>		<b>247342</b>
<b>Chhattisgarh</b>			<b>568</b>					<b>568</b>
<b>Tamil Nadu</b>	<b>26677</b>	<b>5171</b>	<b>3</b>		<b>260247</b>	<b>109</b>		<b>292207</b>
<b>Bihar</b>	<b>324629</b>	<b>10264</b>	<b>10</b>	<b>20953</b>		<b>3755</b>		<b>359611</b>
<b>Jharkhand</b>						<b>800</b>		<b>800</b>
<b>Gujarat</b>	<b>50359</b>	<b>10990</b>	<b>8202</b>		<b>107472</b>		<b>52579</b>	<b>229602</b>
<b>West Bengal</b>	<b>121372</b>	<b>997</b>	<b>1847</b>		<b>6757</b>			<b>130973</b>
<b>Maharashtra</b>	<b>35188</b>	<b>10799</b>	<b>39465</b>	<b>32124</b>	<b>1699696</b>	<b>1816</b>	<b>66531</b>	<b>1885619</b>
<b>Haryana</b>	<b>12737</b>	<b>3880</b>	<b>47</b>	<b>2920</b>		<b>2031</b>		<b>21615</b>
<b>Punjab</b>	<b>22861</b>	<b>4529</b>	<b>20526</b>					<b>47916</b>
<b>Rajasthan</b>	<b>86837</b>	<b>146</b>	<b>41197</b>		<b>866</b>	<b>2127</b>		<b>131173</b>
<b>Karnataka</b>	<b>104467</b>	<b>4578</b>	<b>2129</b>		<b>1370</b>			<b>112544</b>
<b>Andhra Pradesh</b>	<b>68880</b>	<b>6027</b>	<b>1670</b>		<b>267756</b>	<b>106</b>		<b>344439</b>
<b>Telangana</b>								
<b>Kerala</b>		<b>581</b>			<b>82711</b>			<b>83292</b>
<b>Himachal Pradesh</b>	<b>10309</b>	<b>890</b>						<b>11200</b>
<b>Jammu Kashmir</b>		<b>314</b>						<b>314</b>
<b>Assam</b>		<b>1375</b>						<b>1375</b>
<b>Meghalaya</b>								
<b>Delhi</b>								
<b>Total</b>								<b>5161215</b>
<b>SMS sent by AMFUs through NIC, way 2 sms etc</b>								<b>129961</b>
<b>SMS sent through Kisan Portal</b>								<b>14219490</b>
<b>Grand Total</b>								<b>19510666</b>