# GOVERNMENT OF INDIA MINISTRY OF EARTH SCIENCES LOK SABHA UNSTARRED QUESTION No. 4816 TO BE ANSWERED ON WEDNESDAY, APRIL 22, 2015

#### FORECASTING OF NATURAL CALAMITIES

### 4816. SHRI K. N. RAMACHANDRAN:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has been equipped to do forecasting of natural calamities like cloudbursts;
- (b) if so, the details thereof and if not, the reasons therefor;
- (c) whether Jammu and Kashmir has faced severe cloudbursts and floods twice in the past six months and if so, the details thereof;
- (d) whether the Government has any forecast about these two events in advance and if so, the details thereof; and
- (e) the steps taken by the Government to make accurate forecasting of cloudburst and other natural calamities?

#### ANSWER

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

### (a) No Madam.

- (b) Cloud brust is a highly localized phenomena that occurs when cloud get locked in small valleys after getting dissociated with associated large scale circulation. In view of its highly localized nature of occurance in small valleys, the models are not in a position to capture such events. However, using remote sensing techniques the conditions leading to the valley locked cloud brust phenomena can be monitored and such a scenario would not have much lead time to alert the concerned authorities.
- (c) No Madam. However, some districts of Jammu and Kashmir have experienced series of heavy rainfall events during 1<sup>st</sup> fortnight of September 2014 and 29<sup>th</sup>-30<sup>th</sup> March 2015. There has been no observational record of cloud burst (one hour rainfall 100 mm or more) at any place of the state during the above referred period. The daily 24 hrs. rainfall recorded at various locations of J&K is attached in Annexure-I & II.
- (d) Yes Madam. Earth System Science Organization –India Meteorological Department (ESSO-IMD) IMD had issued Heavy rainfall warning in advance to the state govt., media and public on both the events on 3<sup>rd</sup> Sept 2014 and 28<sup>th</sup> March 2015, respectively.
- (e) ESSO-IMD has formulated plan of Himalayan Meteorology Program to augment observing systems by deploying Doppler Weather Radars, rain radars, Automatic Weather Stations (AWSs), Automatic Rain Gauges (ARGs) etc. The above observations will lead to improved understanding of Himalayan weather in general and severe weather in particular. The assimilation of the above observational data will facilitate improvement in now-casting very short range up to 6 hours in advance and forecasting of severe weather phenomena up to 72 hours in advance.

Annexure-I

S.No	STATIONS	Dates September 2014						
		1	2	3	4	5	6	7
1	ANANTNAG (AWS)	10.6	6.4	58.4	180.0	150.2	80.4	20.2
2	SRINAGAR	13.6	0.4	20.0	51.8	52.4	19.5	21.1
3	KOKERNAG	0.6	10.5	57.7	119.4	149.5	88.6	43.3
4	PAHALGAM	33.4	3.2	40.2	58.6	47.2	47.4	24.2
5	PAHALGAM AWS	41.0	4.0	47.0	68.0	52.0	50.0	31.0
6	SRINAGAR(IAF)	2.2	0.0	22.4	53.9	69.6	22.8	26.2
7	BARAMULLA AWS	1.0	0.0	8.0	65.0	84.0	28.0	1.0
8	GULMARG	0.0	0.6	34.0	106.6	128.0	38.2	10.2
9	BADARWAH	0.0	13.4	29.2	81.4	138.8	100.6	0.6
10	GUND	12.6	8.2	22.6	32.6	33.6	26.8	24.6
11	JAMMU	0.0	56.2	9.0	39.3	101.4	218.3	77.0
12	JAMMU(IAF)	0.0	8.0	7.2	44.4	79.2	203.6	21.6
13	KATHUA	0.0	2.8	1.4	33.8	65.6	93.8	0.0
14	KULGAM AWS	1.0	7.0	49.0	82.0	138.0	77.0	48.0
15	QAZI GUND	8.2	7.3	80.4	156.7	206.0	102.7	56.1
16	KUPWARA	2.3	1.8	2.8	45.6	68.2	15.4	1.1
17	LEH I.A.F.	0.0	0.0	8.6	4.4	0.2	0.0	0.0
18	LEH AWS	0.0	0.0	11.0	0.0	0.0	0.0	0.0
19	THOISE(IAF)	0.0	0.0	0.0	9.0	11.7	14.3	0.4
20	POONCH	00	5	51	161	138	55	6
21	AWANTIPUR (IAF)	7.2	1.0	39.1	51.0	140.4	67.0	47.0
22	PULWAMA AWS	4.0	1.0	37.0	61.0	102.0	66.0	45.0
23	RAJOURI	3.0	21.4	20.2	107.3	194.2	68.3	13.0
24	BANIHAL	0.4	15.6	93.7	106.8	188.8	86.1	53.8
25	BATOTE	0.2	31.4	67.8	102.4	207.8	123.0	38.0
26	GOVINDPURA AWS	0.0	17.0	52.0	71.0	202.0	102.0	27.0
27	KATRA	0.0	47.6	21.8	67.4	279.2	209.4	0.0
34	KAWA AWS	0.0	8.0	14.0	64.0	152.0	260.0	-
35	UDHAMPUR (IAF)	0.0	8.0	12.8	51.0	163.0	191.3	152.0

## Annexure-II

C No	STATIONS	Dates March 2015				
<b>3.NO</b>		29	30	31		
1	SRINAGAR	43.8	50.6	0.5		
2	QAZIGUND	21.6	70.7	1.8		
3	PALGAM	47.2	58.2	3.4		
4	KUPWARA	57.8	26.5	6.0		
5	KOKERNAG	20.5	84.7	3.8		
6	GULMARG	51.6	40.1	1.2		
7	JAMMU	13.4	98.1	33.4		
8	BANIHAL	24.8	72.2	7.3		
9	BATOTE	13.7	124.4	21.0		
10	KATRA	34.8	139.2	10.1		
11	BADARWAH	6.8	65.8	6.2		