GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO-189
ANSWERED ON- 15/09/2020

FREQUENCY OF NATURAL DISASTERS

189.   DR. VIKAS MAHATME:

Will the Minister of EARTH SCIENCES be pleased to state:

(a)   whether there has been an unexpected increase in natural disasters like cyclones and floods during the last three years, if so, the details-thereof: and
(b)   whether Government is planning to take steps to improve the data collection capacity of IMD helping it to predict natural events with more accuracy, if so, the details thereof?

ANSWER
MINISTER FOR SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(Dr. HARSH VARDHAN)

(a)   Yes Sir. Based on the statistics during 1891-2017, on an average 5 cyclones develop over North Indian Ocean in a year with 4 developing over Bay of Bengal and 1 over Arabian Sea. However, in the recent past increase in frequency had been observed in formation of cyclones in the North Indian Ocean. Also studies show an increase in frequency of severe cyclones over Arabian Sea in recent years.

The details of Cyclones formed over North Indian Ocean during 2017 to 2019 follow:

YEAR	FREQUENCY OF CYCLONES OVER		Total number of cyclones	Intensity with that of Severe City
	Arabian Sea	Bay of Bengal		
2017	1	2	3	2
2018	3	4	7	6
2019	5	3	8	6

The occurrence of 5 cyclones over Arabian Sea in 2019 against the normal of 1 per year equals the previous record of 1902 for the highest annual cyclone frequency over Arabian Sea. Also 2019 witnessed development of more intense cyclones over Arabian Sea.

Regarding floods, it is mentioned that, the country has witnessed intense to very intense rainfall activity leading to flood scenario in the recent past. The number of stations reported Very Heavy and Extreme Heavy rainfall in the last three years, from 2017 to 2019, follow:

	Number of stations reported during SW Monsoon season (June to September)	
YEAR	Very Heavy Rainfall (115.6-204.4 mm)	Extremely Heavy Rainfall (204.5 mm or more)
2017	1824	261
2018	2181	321
2019	3056	554

(b)	India Meteorological Department (IMD) uses a suite of quality observations from satellites, radars and conventional & automatic weather stations for monitoring of cyclones and prediction of severe weather. It includes INSAT 3D, 3DR and SCATSAT satellites, Doppler Weather Radars (DWRs) along the coast and Automated Weather Stations (AWS), Automatic Rain Gauges (ARGs), meteorological buoys over the Oceans and ships. Operational implementation of improved suite of weather prediction models has enhanced the weather forecasting capability through assimilation of all available global data for the generation of forecast products at 12 km grid globally and 3 km grid over India/regional/mega city domains.

*****