GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No 1129
TO BE ANSWERED ON THURSDAY, JULY 30, 2015

WEATHER MODIFICATION TECHNIQUES

1129. SHRI AVINASH PANDE:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether Government has undertaken any research or directed any study to assess the risks and benefits of weather modification techniques like cloud seeding to induce artificial rainfall in areas facing a deficit of rain;
(b) If so, the details thereof and findings regarding the risks of such technology that induces changes in regular climate patterns; and
(c) If not, whether it is lawful and permissible, or even advisable for State Governments to make use of such technology to induce artificial rainfall, in the absence of any study, or rules and guidelines formulated by the Central Government?

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

(a) Yes Sir.
(b) Earth System Science Organization - Indian Institute of Tropical Meteorology (ESSO-IITM) is putting its effort in understanding the rain formation in clouds through studying cloud microphysical characteristics through a research program Cloud Aerosol Interaction and Precipitation Enhancement Experiment (CAIPEEX).

CAIPEEX has so far contributed to total of around 800h of intense observations involving instrumented aircraft, radars and other surface based instruments. These observations have helped in better understanding of characteristics of monsoon clouds and interactions of clouds and aerosols. Specifically, the findings suggest the key role of dust aerosol (pollutant) on cloud and rain processes over the Indian monsoon region. These observations are being used to improve the representation and characterization of clouds in the weather and climate models. On the whole, 23 randomized seeding experiments were carried out both by flares and fine grained salt powder following World Meteorological Organization (WMO) Weather Modification Expert Committee recommendations.

As things stand today, artificial rain making techniques involving cloud seeding cannot be used for bringing rain clouds to rainfall deficit/drought areas. These techniques can only induce potential clouds, already passing over a given place, to produce enhanced quantum of rain. Hence, the said technology intervention will not be changing the pre-existing atmospheric circulation characteristics.

(c) Does not arise.

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