

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. - 1783
ANSWERED ON 16/03/2023

Low orbit nano-satellites

1783. SHRI PARIMAL NATHWANI:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether Government is planning to make use of low orbit nano-satellites to predict local weather conditions more accurately; and
- (b) if so, the details thereof and, if not, the reasons therefor?

ANSWER

THE MINISTER FOR STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

- (a)-(b) National Centre for Medium Range Weather Forecasting (NCMRWF), Ministry of Earth Sciences (MoES) regularly assimilates the Global Navigation Satellite System-Radio Occultation (GNSS-RO) data from a series of nano satellites operated by international agencies, SPIRE and GeoOptics. These satellites provide information on temperature and humidity soundings with highest vertical resolution. Numerical Weather Prediction (NWP) assimilation of GNSS-RO data from various satellites helps in the improvement of short-range forecasts.

Recently Indian Space Research Organization (ISRO) has launched an Earth Observation (small) Satellite (EOS-7) on an experiment basis with an expected orbital life period of one year. NCMRWF, MoES will use this data in the NWP assimilation system for the better representation of humidity and temperature information and hence the accurate prediction of convection and precipitation.
