

**GOVERNMENT OF INDIA  
SPACE  
LOK SABHA**

UNSTARRED QUESTION NO:3972  
ANSWERED ON:17.12.2014  
FLOOD FORECASTING  
Galla Shri Jayadev

**Will the Minister of SPACE be pleased to state:**

- (a) whether ISRO has conducted a pilot project in Andhra Pradesh for developing a methodology for forecasting floods;
- (b) if so, the details thereof;
- (c) the details of each of the models developed under the project; and
- (d) the details of the plans to implement the models?

**Answer**

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE (DR. JITENDRA SINGH):

(a) Yes Madam.

(b) National Remote Sensing Centre (NRSC) of ISRO has conducted a pilot project in Godavari basin in Andhra Pradesh for developing a methodology for forecasting floods as a R&D initiative. The methodology was applied in near real-time during monsoon periods of 2010-2014, in collaboration with Central Water Commission (CWC), Hyderabad and India Meteorological Department (IMD).

(c) The model has been developed for flood forecast purposes in Godavari basin adopting HEC-HMS (Hydro- logical Engineering Center – Hydrological Modelling System) software and using satellite derived data on landuse/landcover, soils, elevation data and ground based data of near real-time gauge discharge of ups- tream gauge stations and rainfall as inputs. The model is terrain specific and provides flood forecasts at specific stations on the Godavari River.

(d) The flood forecasting methodology is transferred to CWC, Hyderabad after successful testing. The Central Water Commission, Ministry of Water Resources is mandated for flood forecasts in India and ISRO has not formulated any plans to implement the model.