

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 1117
TO BE ANSWERED ON MONDAY, DECEMBER 16, 2013

PREDICTION OF HEAVY RAINS IN UTTARAKHAND

1117. SHRIMATI JAYA BACHCHAN:

Will the Minister of **EARTH SCIENCES** be pleased to state:

- (a) whether Government has taken note of the recent failures in predicting heavy rains in Uttarakhand which led to massive and destructive floods;
- (b) whether Government has constituted any committee/study to analyze the reasons therefor and give in recommendations;
- (c) whether the report of committee/study has been submitted;
- (d) if so, the status of implementation of the recommendations; and
- (e) if not, what steps Government has taken to avoid such disasters in future?

ANSWER

MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI S. JAIPAL REDDY)

- (a) There was no failure as far as issuance of severe weather warnings by the Earth System Science Organization – India Meteorological Department (ESSO-IMD). ESSO-IMDs Dehradun Center had issued forecast of isolated heavy to very heavy rains (12 - 24 cm) on June 15, 2013 for Kedarnath, Joshimath, Badrinath, Gangotri and Yamunotri for three days including the advice to postpone the Char Dham Yatra accordingly to designated state level authorities.
- (b) No Sir.
- (c)-(d) Does not arise.
- (e) The heavy to very heavy rains (12-24 cm) in the entire region, starting from June 15, lasted for three days. During June, upstream of Kedarnath, the glacier is covered by thick snow cover. It has been reported that there was heavy snowfall in the region just before the event as well. Adding to this, continuous rains and continuous snow melt caused waters in the Chorabari Lake to raise. The lake's weak moraine barrier gave way and a huge volume of water along with large glacial boulders came down the channel to the east devastating Kedarnath town, Rambara, Gaurikund and other places in its wake. According to official sources, over 900,000 people have been affected by the event in the state of Uttarakhand. The very heavy rainfall in the entire catchment regions of Mandakini, Alakananda, Bhagirathi and other river basins further increased the magnitude of floods in the state.

Based on scientific assessment of the needs for further augmentation of observing system network, comprising Doppler Weather Radars, rain radars, Automatic Weather Stations (AWSs), Automatic Rain Gauges (ARGs), Snow Gauges etc. expansion has been formulated over the western Himalayan region. In addition, augmenting high performance computing facilities, communication, forecast/warning systems, product dissemination systems etc. are part of a continuous process by which state-of-the-art science and technology tools can be made accessible to the scientists engaged in weather research and forecasting for enhancing the service quality.

The World Bank (WB) and the Asian Development Bank (ADB) on receiving a request from the Department of Economic Affairs (DEA), (GoI), fielded a Joint Rapid Damage and Needs Assessment (JRDNA) Mission within the State. The JRDNA team visited the State during July 29 to August 07, 2013, and in collaboration with the GoU undertook a multi-sectoral assessment of the damages and laid the grounds for an immediate recovery and reconstruction needs framework. While the disaster affected almost all districts within the state, the main focus of the assessment was on five districts that were most affected: Bageshwar, Chamoli, Pithoragarh, Rudraprayag, and Uttarkashi.
