

**GOVERNMENT OF INDIA
WATER RESOURCES
LOK SABHA**

UNSTARRED QUESTION NO:1908

ANSWERED ON:11.08.2011

DECLINE IN GROUNDWATER LEVELS

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Will the Minister of WATER RESOURCES be pleased to state:

- (a) whether National Aeronautics and Space Administration has recently made observations about India`s groundwater levels through satellite data;
- (b) if so, details of the extent to which the groundwater level has fallen, State-wise, including in Uttar Pradesh and Jharkhand;
- (c) whether indiscriminate exploitation of groundwater by private companies is a major reason for the depletion of groundwater;
- (d) if so, the details thereof;
- (e) whether the Government is planning to set up a regulatory body to monitor the exploitation of groundwater; and
- (f) if so, the details thereof?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES & MINORITY AFFAIRS (SHRI VINCENT H. PALA)

(a) A paper on `Satellite-based estimates of groundwater depletion in India" was published in August, 2009 issue of scientific journal Nature by American Scientists from National Aeronautics and Space Administration(NASA) and University of California, United States of America.

(b) An area of about 4.4 lakh sq.km. covering the States of Rajasthan, Punjab, Haryana and Delhi was taken up as a single unit for the above study without mapping of ground water levels actually by these Scientists. The Scientists have made an attempt to estimate ground water depletion in northwestern India using Terrestrial Water Storage (TWS) change observations from NASA Gravity Recovery and Climate Experiment (GRACE) satellite data for the period from August, 2002 to October, 2008. The study has indicated that groundwater is depleting in these four States at a mean rate of 4.0 ± 1.0 cm/year equivalent height of water (17.7 ± 4.5 km³/year). The states of Uttar Pradesh and Jharkhand were not covered under the study.

(c) Ground water level in an area is resultant of various recharge parameters like precipitation, inflow from surface water bodies, seepages from various sources etc. and discharge parameters like withdrawal for various purposes including irrigation, domestic and industries and outflow to surface water bodies.

(d) Ground water withdrawal as on 2004 for all uses is estimated as 231 bcm per year, out of which withdrawal for irrigation is 213 bcm and that for domestic and industrial purposes together is 18 bcm.

(e) to (f) The Government has constituted Central Ground Water Authority, under Section 3(3) of Environment (Protection) Act of 1986, to regulate and control the ground water development and management in the country. Further, the Ministry of Water Resources has circulated to the States & Union Territories the Model Bill to regulate and control the development of ground water. So far States of Andhra Pradesh, Bihar, Goa, Himachal Pradesh, Kerala, Tamil Nadu, West Bengal and UTs of Chandigarh, Dadra & Nagar Haveli, Lakshadweep and Puducherry have enacted ground water legislation.