Goalpara district of Assam, where data is available since 1971 till 2010 as observed by Central Water Commission, are as under :-

The Decadal Monsoon, Non-monsoon and Annual flows of river Brahmaputra at Panchratna site

(in MCM)

Period	1971-80	1981-90	1991-2000	2001-10
Monsoon	412287	402609	341942	364284
Non-monsoon	130796	122943	99911	111162
Yearly (Avg)	5300035 *	525552	441853	475446
Decadal	5300035	5255512	4418529	4754452

*Data for the year 1971 (Non-monsoon) not available.

(b) and (c) Central Water Commission has been involved in collection, analysis and publication of hydrological data in the Data Book/Annual Water Year Book of the Brahmaputra River since 1971.

(d) and (e) From the records and analysis of hydrological data available, it cannot be conclusively interpreted that the flow in Brahmaputra has shown declining trend. However, based on the average of last four decades, a decline of less than 4% has been observed, which can be attributed to the water resources development in the region.

Research in flood control

3551. SHRI RAMA CHANDRA KHUNTIA: Will the Minister of WATER RESOURCES be pleased to state:

(a) whether the National Institute of Hydrology, Roorkee has done any research regarding the flood control in drought prone areas in Orissa, Chhattisgarh, Jharkhand and in areas like Punjab, Haryana, Delhi and Rajasthan where ground water level is going down; and

(b) if so, what are the specific suggestion?

THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES (SHRI VINCENT PALA) : (a) The National Institute of Hydrology has carried out regional flood frequency analysis and

developed the regional flood formulate for estimation of floods for gauged and ungauged catchment in drought prone parts of Orissa and Jharkhand and other states like Punjab and Rajasthan. Rainfall runoff modeling has also been carried out for design flood estimation in the moral catchment of Rajasthan State.

(b) (i) The flood frequency analysis and regional flood formulae may be used for Hydraulic Design of various types of Hydraulic structures for the flood protection in the states of Orissa and Jharkhand.

(ii) The results of rainfall runoff modeling may be utilized for designing of dams and barrages for flood protection in the mõral catchment of Rajasthan.

Management of rain water harvesting

3552. PROF. SAIF-UD-DIN SOZ : Will the Minister of WATER RESOURCES be pleased to state:

(a) the progress made, in respect of rain water harvesting in the country; and

(b) whether the Ministry envisages to put in shape any workable mechanism to ensure real progress in the movement for rain water harvesting?

THE MINISTER OF STATE IN THE MINISTRY OF WATER RESOURCES (SHRI VINCENT PALA) : (a) Central Ground Water Board has implemented pilot/demonstrative projects on rain water harvesting and artificial recharge since VIII Plan for replication by the State Governments. A total of 938 recharge structures have been constructed during VIII, IX and X Plan. During the XI Plan, a total of 1447 rain water harvesting and recharge structures have been approved till 25th August, 2011 against which 544 structures have been completed.

Roof top rain water harvesting has been made mandatory by States/Union Territories of Andhra Pradesh, Bihar, Goa, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand, West Bengal, Chandigarh, Daman & Diu, NCT Delhi and Puducherry. Besides, efforts have been made by the State Governments to implement as well as promote rain water harvesting. Efforts made by various State Governments are listed in the Statement. *(See* below).