

GOVERNMENT OF INDIA  
MINISTRY OF WATER RESOURCES,  
RIVER DEVELOPMENT & GANGA REJUVENATION  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 2705**  
ANSWERED ON 01.12.2016

**CONTAMINATION OF GROUND WATER**

2705. SHRI JITENDRA CHAUDHURY  
SHRI VENKATESH BABU T.G.  
SHRI SUSHIL KUMAR SINGH

Will the Minister of WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION be pleased to state:

- (a) whether the Government is aware that ground water in the country including Delhi and Bihar is getting day by day highly contaminated with both bio and chemical pollutants like Fluoride, Nitrate, Arsenic, Lead, Cadmium, Chromium as well as other metals, if so, the details and the present status thereof, State-wise;
- (b) the details of steps taken along with the ongoing schemes/projects to tackle the situation and improve/recharge ground water level including the quantum of funds allocated/released/spent for the purpose during the current plan period, State/ year-wise;
- (c) whether the Government has issued any advisories to the States against large scale extraction and depletion of ground water, if so, the details thereof; and
- (d) whether the Government proposes to depute doctors and scientists to check depletion as well as contamination of ground water in the country including Aurangabad district of Bihar, if so, the details thereof?

**ANSWER**

THE MINISTER OF STATE FOR WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION

(DR. SANJEEV KUMAR BALYAN)

(a) Ground water quality data generated by Central Ground Water Board (CGWB) during various scientific studies and ground water quality monitoring indicates that ground water in isolated pockets in parts of various States including Delhi and Bihar is contaminated with Fluoride, Nitrate, Arsenic, etc. The number of Blocks in each State, affected with ground water contamination are given at **Annexure-I**.

According to the Ministry of Drinking Water & Sanitation (MoDWS), as on 1.4.2016, out of 1.42 million habitations in various districts of the country, 71,077 habitations are affected by contaminated ground water.

- (b) Steps taken by the Government to tackle the situation of ground water contamination includes.
- i. Results of the analysis are shared with concerned State agencies for awareness and intensive monitoring and remediation for drinking water use.

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- ii. Options such as surface water & ground water based Piped Water Supply Schemes, tapping deeper aquifer and Arsenic Removal Plant (ARP)/ Fluoride Removal Plants have been adopted by various States to deal with the menace of As & F contamination in ground water.
- iii. Awareness generation programs in the Country on preventing ground water pollution and avoiding use of contaminated water, rain water harvesting and artificial recharge to ground water, are being carried out.
- iv. Ministry of Drinking Water & Sanitation (MoDWS) supplements the efforts of the States by providing them technical and financial support to the schemes being developed for drinking water supply in the State. Under NRDWP Up to 67% fund allocated to the States can be utilized for coverage of water quality affected habitations and for tackling water quality problems in rural areas of the country.
- v. CGWB carries out exploratory drilling to delineate contaminant free aquifer zones and successful exploratory wells are handed over to the concerned agencies in the States for utilization by them.

Further, to improve ground water levels by rain water harvesting and artificial recharge to ground water, CGWB has taken up Aquifer Mapping and Management programme during XII Plan, under the scheme of Ground Water Management and Regulation. The Aquifer Mapping is aimed at delineating aquifer disposition and their characterization for preparation of aquifer/area specific ground water management plans, to be implemented in collaboration with the community.

To increase availability of drinking water, the Ministry of Drinking Water & Sanitation has suggested all States to adopt water conservation measures like roof top rainwater harvesting, erecting sustainability structures for water conservation etc. For creating such sustainability structures, 10 % of National Rural Drinking Water Programme (NRDWP) fund is provided to the States. State-wise details of expenditures are given at **Annexure II(a) to II(d)**.

Department of Land Resources is currently implementing 8214 watershed development projects in 28 States (except Goa) covering an area of about 39.07 million ha. under the Watershed Development Component (WDC) of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) principally for development of rainfed portions of net cultivated area and culturable wastelands. The major activities taken up under the WDC-PMKSY, inter-alia, include ridge area treatment, drainage line afforestation, soil and moisture conservation, rain water harvesting, horticulture, pasture development, creation of livelihoods for asset-less person, etc. State wise details of funds released are in **Annexure –III**.

Ministry of Urban Development has circulated its Model Building Bye-Laws (2016) to all State Governments which, inter-alia, incorporates provisions for Rain Water Harvesting. Atal Mission for Rejuvenation and Urban Transformation (AMRUT) mandates the States to formulate a policy and action plan for having rain water harvesting structures in all commercial, public buildings and new buildings on plots of 300 sq.m and above.

Under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), the water conservation and water harvesting structures to augment ground water constitute special focus area on recharging ground water including drinking water sources. State wise details of expenditures on Natural Resources Management under MGNREGA are at **Annexure – IV**.

(c) Central Ground Water Authority (CGWA) has issued advisory to Chief Secretaries of all States and Administrators of all UTs to take measures to promote/adopt rain water harvesting and artificial recharge to ground water against large scale extraction and depletion of ground water. 30 States/UTs have made rain water harvesting mandatory by enacting laws or by formulating rules & regulations or by including provisions in Building bye-laws or through suitable Government Orders.

(d) CGWB by deputing Scientists of the Board monitors ground water levels four times a year (January, April/May, August and November), to check depletion of ground water and its quality, once every year during pre-monsoon (April/May) through network of ground water observation wells in the Country, including Aurangabad district of Bihar. The data generated is analysed and shared with the respective State Government Departments as well as placed on the website of CGWB.

As per the information received from Public Health & Engineering Department (PHED), State Government of Bihar, the State deposes scientists to check the depletion as well as contamination of ground water in respect of Bihar. PHED also takes up need based services of doctors, as and when required, in the event of ground water contamination .

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Annexure referred in reply to Part (a) of the Lok Sabha Starred Q.No. 2705 dated 01.12.2016 regarding "Contamination of Ground Water"

**STATE-WISE DETAILS OF GEOGENIC CONTAMINANTS IN GROUND WATER**

| Sl. No       | No. of States        | No of Blocks affected                  |                            |                         |                           |                      |
|--------------|----------------------|--|----------------------------|-------------------------|---------------------------|----------------------|
|              |                      | Salinity (EC above 3000 micro mhos/cm) | Fluoride ( above 1.5 mg/l) | Nitrate (above 45 mg/l) | Arsenic (above 0.01 mg/l) | Iron (above 1 mg/l ) |
| 1            | Andhra Pradesh       | 65                                     | 117                        | 162                     | 4                         | 34                   |
| 2            | Telangana            | 17                                     | 215                        | 115                     | 2                         | 38                   |
| 3            | Assam*               | 0                                      | 9                          | 0                       | 19                        | 18                   |
| 4            | Arunachal Pradesh*   | 0                                      | 0                          | 0                       | 0                         | 4                    |
| 5            | Bihar                | 3                                      | 141                        | 26                      | 78                        | 32                   |
| 6            | Chhattisgarh         | 0                                      | 29                         | 33                      | 1                         | 9                    |
| 7            | Delhi                | 11                                     | 10                         | 14                      | 2                         | 0                    |
| 8            | Goa                  | 0                                      | 0                          | 0                       | 0                         | 2                    |
| 9            | Gujarat              | 104                                    | 69                         | 143                     | 22                        | 46                   |
| 10           | Haryana              | 34                                     | 91                         | 45                      | 26                        | 45                   |
| 11           | Himachal Pradesh     | 0                                      | 0                          | 8                       | 1                         | 0                    |
| 12           | Jammu & Kashmir      | 0                                      | 2                          | 11                      | 7                         | 22                   |
| 13           | Jharkhand            | 0                                      | 38                         | 16                      | 3                         | 7                    |
| 14           | Karnataka            | 114                                    | 118                        | 160                     | 7                         | 116                  |
| 15           | Kerala               | 15                                     | 10                         | 35                      | 0                         | 74                   |
| 16           | Madhya Pradesh       | 22                                     | 79                         | 260                     | 25                        | 127                  |
| 17           | Maharashtra          | 25                                     | 32                         | 158                     | 0                         | 28                   |
| 18           | Manipur*             | 0                                      | 0                          | 0                       | 2                         | 0                    |
| 19           | Meghalaya*           | 0                                      | 0                          | 0                       | 0                         | 0                    |
| 20           | Nagaland*            | 0                                      | 0                          | 0                       | 0                         | 0                    |
| 21           | Odisha               | 42                                     | 68                         | 38                      | 1                         | 91                   |
| 22           | Punjab               | 14                                     | 43                         | 50                      | 24                        | 43                   |
| 23           | Rajasthan            | 87                                     | 203                        | 123                     | 1                         | 58                   |
| 24           | Tamil Nadu           | 70                                     | 51                         | 154                     | 14                        | 10                   |
| 25           | Tripura*             | 0                                      | 0                          | 0                       | 0                         | 4                    |
| 26           | Uttar Pradesh        | 35                                     | 74                         | 180                     | 121                       | 26                   |
| 27           | Uttarakhand          | 0                                      | 0                          | 9                       | 0                         | 0                    |
| 28           | West Bengal          | 59                                     | 43                         | 7                       | 90                        | 331                  |
| 29           | Andaman & Nicobar    | 1                                      | 0                          | 0                       | 0                         | 6                    |
| 30           | Dadra & Nagar Haveli | 0                                      | 0                          | 1                       | 0                         | 0                    |
| 31           | Chandigarh           | 0                                      | 0                          | 0                       | 0                         | 0                    |
| 32           | Daman & Diu          | 2                                      | 0                          | 1                       | 1                         | 1                    |
| 33           | Pudducherry#         | 0                                      | 0                          | 2                       | 0                         | 0                    |
| 34           | Lakshadweep^         | 0                                      | 3                          | 0                       | 0                         | 0                    |
| <b>Total</b> |                      | <b>720</b>                             | <b>1445</b>                | <b>1751</b>             | <b>451</b>                | <b>1172</b>          |

\*District as unit of survey, # Region as unit of survey, ^ Island as unit of survey

Note: Data Source is CGWB survey upto May2015 and reports of State Government

Annexure referred to in reply to Part (b) of the Lok Sabha Unstarred Q. No. 2705 dated 01.12.2016 regarding “Contamination of Ground Water”

## State-wise Total Number Of Recharge Structures under NRDWP

Sanction Year:-2013-2014 State:-All State

\* All Amount in lakhs

| S.No. | State               | Pits And Trenches | Check Dams  | Perco Lation Tanks | Point Source Recharging (Conversion Of Defunct Borewells) | Dug- Wells/ Injection/ Skimming Wells | Ooranies/ Village Ponds/ Traditional Water Bodies | Roof Top    | Recharge Shaft | Others*      | Total        | Estimated Cost   | Expenditure     |
|-------|---------------------|-------------------|-------------|--------------------|---|---------------------------------------|---|-------------|----------------|--------------|--------------|------------------|-----------------|
| 1     | 2                   | 3                 | 4           | 5                  | 6   | 7                                     | 8   | 9           | 10             | 11           | 12           | 13               | 14              |
| 1     | ANDAMAN and NICOBAR | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 0           | 0              | 7            | 7            | 337.37           | 0.00            |
| 2     | ANDHRA PRADESH      | 0                 | 0           | 36                 | 0   | 0                                     | 0   | 0           | 0              | 0            | 36           | 94.17            | 28.91           |
| 3     | ARUNACHAL PRADESH   | 15                | 175         | 0                  | 0   | 0                                     | 0   | 7           | 0              | 2            | 199          | 1597.48          | 921.57          |
| 4     | ASSAM               | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 1363        | 0              | 72           | 1435         | 87836.89         | 845.08          |
| 5     | BIHAR               | 1                 | 0           | 0                  | 194   | 0                                     | 0   | 0           | 0              | 1            | 196          | 86313.04         | 29.60           |
| 6     | CHATTISGARH         | 46                | 199         | 34                 | 31  | 1                                     | 17  | 278         | 1              | 2304         | 2910         | 4349.96          | 1597.81         |
| 7     | GUJARAT             | 338               | 60          | 0                  | 0   | 30                                    | 117   | 106         | 0              | 462          | 1113         | 14698.42         | 7414.11         |
| 8     | HARYANA             | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 1           | 0              | 0            | 1            | 88.00            | 0.00            |
| 9     | HIMACHAL PRADESH    | 5                 | 50          | 0                  | 1   | 4                                     | 9   | 47          | 0              | 76           | 192          | 1403.72          | 846.70          |
| 10    | JAMMU AND KASHMIR   | 0                 | 85          | 6                  | 0   | 2                                     | 98  | 0           | 0              | 36           | 227          | 5075.25          | 2589.69         |
| 11    | JHARKHAND           | 1443              | 2           | 0                  | 1   | 0                                     | 0   | 165         | 0              | 114          | 1725         | 2403.39          | 1999.07         |
| 12    | KARNATAKA           | 95                | 986         | 96                 | 0   | 2                                     | 25  | 1           | 13             | 138          | 1343         | 11373.70         | 3175.49         |
| 13    | KERALA              | 0                 | 2           | 0                  | 0   | 0                                     | 2   | 0           | 0              | 5            | 9            | 1934.29          | 572.48          |
| 14    | MADHYA PRADESH      | 355               | 784         | 42                 | 8   | 279                                   | 51  | 280         | 210            | 2372         | 4171         | 7273.59          | 5637.70         |
| 15    | MAHARASHTRA         | 3528              | 309         | 7                  | 0   | 236                                   | 102   | 56          | 326            | 1688         | 5926         | 9173.56          | 5733.86         |
| 16    | MANIPUR             | 2                 | 3           | 0                  | 0   | 0                                     | 6   | 25          | 0              | 11           | 47           | 410.00           | 254.16          |
| 17    | MEGHALAYA           | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00             | 0.00            |
| 18    | MIZORAM             | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00             | 0.00            |
| 19    | NAGALAND            | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 14          | 0              | 19           | 33           | 756.00           | 493.43          |
| 20    | ODISHA              | 255               | 1           | 0                  | 12  | 0                                     | 0   | 0           | 0              | 3614         | 3882         | 3679.93          | 1515.67         |
| 21    | PUDUCHERRY          | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00             | 0.00            |
| 22    | PUNJAB              | 1                 | 0           | 0                  | 0   | 5                                     | 1   | 18          | 0              | 50           | 75           | 1020.86          | 265.62          |
| 23    | RAJASTHAN           | 1                 | 1           | 0                  | 0   | 0                                     | 0   | 110         | 0              | 137          | 249          | 1016.59          | 266.54          |
| 24    | SIKKIM              | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 155         | 0              | 8            | 163          | 392.19           | 254.02          |
| 25    | TAMIL NADU          | 1                 | 785         | 35                 | 0   | 0                                     | 0   | 0           | 141            | 219          | 1040         | 8051.42          | 7075.89         |
| 26    | TELANGANA           | 0                 | 0           | 59                 | 3   | 0                                     | 0   | 0           | 0              | 1            | 63           | 109.58           | 41.90           |
| 27    | TRIPURA             | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 11          | 0              | 4            | 15           | 30.24            | 18.87           |
| 28    | UTTAR PRADESH       | 0                 | 0           | 0                  | 0   | 1                                     | 0   | 0           | 1              | 2            | 3            | 2.82             | 1.44            |
| 29    | UTTARAKHAND         | 0                 | 0           | 0                  | 0   | 0                                     | 0   | 102         | 0              | 0            | 102          | 423.98           | 281.12          |
| 30    | WEST BENGAL         | 3                 | 0           | 0                  | 0   | 43                                    | 0   | 0           | 0              | 2            | 48           | 226.35           | 74.75           |
|       | <b>Total</b>        | <b>6089</b>       | <b>3442</b> | <b>315</b>         | <b>250</b>  | <b>603</b>                            | <b>428</b>  | <b>2739</b> | <b>692</b>     | <b>11344</b> | <b>25210</b> | <b>250072.79</b> | <b>41935.48</b> |

\* Others May include Infiltration Rings, Sub-Surface Dykes, Others, Revival of traditional water harvesting structures, Flushing/Hydro-fracturing, Bore blasting and Others, Spring Source Development, Solar Pump/ Dual Pump (Solar)

Annexure referred to in reply to Part (b) of the Lok Sabha Unstarred Q. No. 2705 dated 01.12.2016 regarding “Contamination of Ground Water”

## State-wise Total Number Of Recharge Structures under NRDWP

\* All Amount in lakhs

| S.No. | State               | Pits And Trenches | Check Dams  | Percolation Tanks | Point Source Recharging (Conversion Of Defunct Borewells) | Dug- Wells/ Injection/ Skimming Wells | Ooranies/ Village Ponds/ Traditional Water Bodies | Roof Top    | Recharge Shaft | Others*      | Total        | Estimated Cost   | Expenditure     |
|-------|---------------------|-------------------|-------------|-------------------|---|---------------------------------------|---|-------------|----------------|--------------|--------------|------------------|-----------------|
| 1     | 2                   | 3                 | 4           | 5                 | 6   | 7                                     | 8   | 9           | 10             | 11           | 12           | 13               | 14              |
| 1     | ANDAMAN and NICOBAR | 0                 | 0           | 0                 | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00             | 0.00            |
| 2     | ANDHRA PRADESH      | 0                 | 0           | 0                 | 0   | 0                                     | 0   | 0           | 0              | 152          | 152          | 6.08             | 6.08            |
| 3     | ARUNACHAL PRADESH   | 11                | 8           | 0                 | 0   | 0                                     | 0   | 1           | 0              | 2            | 22           | 232.22           | 51.64           |
| 4     | ASSAM               | 0                 | 0           | 0                 | 0   | 0                                     | 2   | 8           | 0              | 51           | 61           | 67.85            | 0.00            |
| 5     | BIHAR               | 348               | 0           | 0                 | 0   | 0                                     | 0   | 217         | 45             | 58           | 623          | 36660.30         | 18777.32        |
| 6     | CHATTISGARH         | 281               | 77          | 34                | 50  | 25                                    | 5   | 2312        | 0              | 3869         | 6653         | 4731.76          | 681.59          |
| 7     | GUJARAT             | 1                 | 6           | 0                 | 0   | 30                                    | 0   | 1773        | 0              | 45           | 1855         | 11320.36         | 4927.20         |
| 8     | HARYANA             | 0                 | 0           | 0                 | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00             | 0.00            |
| 9     | HIMACHAL PRADESH    | 1                 | 41          | 1                 | 0   | 4                                     | 1   | 21          | 0              | 107          | 176          | 857.02           | 288.90          |
| 10    | JAMMU AND KASHMIR   | 3                 | 23          | 1                 | 0   | 0                                     | 38  | 0           | 0              | 9            | 74           | 1710.06          | 426.64          |
| 11    | JHARKHAND           | 1457              | 15          | 0                 | 5   | 0                                     | 0   | 43          | 0              | 287          | 1807         | 1094.20          | 919.40          |
| 12    | KARNATAKA           | 109               | 865         | 95                | 1   | 158                                   | 17  | 0           | 0              | 214          | 1459         | 14396.78         | 4366.20         |
| 13    | KERALA              | 0                 | 7           | 0                 | 0   | 0                                     | 0   | 0           | 0              | 0            | 7            | 2097.60          | 104.71          |
| 14    | MADHYA PRADESH      | 136               | 758         | 20                | 54  | 126                                   | 0   | 203         | 1101           | 2860         | 4157         | 6253.24          | 2529.10         |
| 15    | MAHARASHTRA         | 720               | 317         | 4                 | 0   | 18                                    | 41  | 25          | 5058           | 6986         | 8111         | 8223.59          | 2004.37         |
| 16    | MANIPUR             | 1                 | 1           | 0                 | 0   | 1                                     | 14  | 68          | 0              | 3            | 88           | 2472.37          | 1471.68         |
| 17    | MEGHALAYA           | 0                 | 0           | 0                 | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00             | 0.00            |
| 18    | MIZORAM             | 0                 | 0           | 0                 | 0   | 0                                     | 0   | 11          | 0              | 0            | 11           | 762.08           | 15.89           |
| 19    | NAGALAND            | 0                 | 0           | 0                 | 0   | 0                                     | 1   | 10          | 0              | 92           | 103          | 994.98           | 997.98          |
| 20    | ODISHA              | 175               | 10          | 0                 | 0   | 0                                     | 0   | 0           | 2              | 3411         | 3596         | 526.19           | 312.56          |
| 21    | PUDUCHERRY          | 0                 | 0           | 0                 | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00             | 0.00            |
| 22    | PUNJAB              | 0                 | 0           | 0                 | 0   | 0                                     | 18  | 264         | 0              | 148          | 430          | 3763.66          | 1394.39         |
| 23    | RAJASTHAN           | 3                 | 2           | 0                 | 0   | 0                                     | 0   | 64          | 0              | 5            | 74           | 2636.45          | 520.85          |
| 24    | SIKKIM              | 0                 | 0           | 0                 | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00             | 0.00            |
| 25    | TAMIL NADU          | 20                | 502         | 0                 | 0   | 0                                     | 40  | 0           | 35             | 122          | 684          | 5635.97          | 4736.59         |
| 26    | TELANGANA           | 0                 | 0           | 0                 | 51  | 0                                     | 0   | 0           | 0              | 0            | 51           | 45.38            | 40.90           |
| 27    | TRIPURA             | 2                 | 1           | 7                 | 0   | 1                                     | 27  | 111         | 1              | 53           | 202          | 1333.60          | 155.81          |
| 28    | UTTAR PRADESH       | 0                 | 308         | 0                 | 0   | 0                                     | 0   | 0           | 0              | 2            | 310          | 16823.29         | 11759.47        |
| 29    | UTTARAKHAND         | 3                 | 46          | 38                | 0   | 7                                     | 4   | 133         | 0              | 38           | 269          | 1363.28          | 860.63          |
| 30    | WEST BENGAL         | 0                 | 0           | 82                | 0   | 79                                    | 0   | 0           | 0              | 4            | 165          | 736.09           | 28.96           |
|       | <b>Total</b>        | <b>3271</b>       | <b>2987</b> | <b>282</b>        | <b>161</b>  | <b>449</b>                            | <b>208</b>  | <b>5264</b> | <b>6242</b>    | <b>18518</b> | <b>31140</b> | <b>124744.40</b> | <b>57378.86</b> |

- Others May include infiltration Rings, Sub-Surface Dykes, Others , Revival of traditional water harvesting structures, Flushing/ Hydro-fracturing, Bore blasting and others , Spring Source Development, Solar Pump/ Dual pump( solar )

Annexure referred to in reply to Part (b) of the Lok Sabha Unstarred Q.No. 2705 dated 01.12.2016 regarding “Contamination of Ground Water”

**\* All Amount in lakhs**

State-wise Total Number Of Recharge Structures under NRDWP

Sanction Year:-2015-2016 State:-All State

| S.No. | State               | Pits And Trenches | Check Dams | Perco Lation Tanks | Point Source Recharging (Conversion Of Defunct Borewells) | Dug- Wells/ Injection/ Skimming Wells | Ooranies/ Village Ponds/ Traditional Water Bodies | Roof Top    | Recharge Shaft | Others*      | Total        | Estimated Cost  | Expenditure     |
|-------|---------------------|-------------------|------------|--------------------|---|---------------------------------------|---|-------------|----------------|--------------|--------------|-----------------|-----------------|
| 1     | 2                   | 3                 | 4          | 5                  | 6   | 7                                     | 8   | 9           | 10             | 11           | 12           | 13              | 14              |
| 1     | ANDAMAN and NICOBAR | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00            | 0.00            |
| 2     | ANDHRA PRADESH      | 56                | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 56           | 8.19            | 8.19            |
| 3     | ARUNACHAL PRADESH   | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00            | 0.00            |
| 4     | ASSAM               | 0                 | 0          | 0                  | 0   | 0                                     | 13  | 0           | 0              | 0            | 13           | 6.11            | 3.41            |
| 5     | BIHAR               | 10                | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 10           | 100.00          | 0.00            |
| 6     | CHATTISGARH         | 56                | 35         | 3                  | 6   | 0                                     | 1   | 230         | 4              | 3092         | 3423         | 2565.73         | 184.53          |
| 7     | GUJARAT             | 63                | 146        | 0                  | 0   | 0                                     | 0   | 1267        | 8              | 135          | 1611         | 15375.63        | 3859.67         |
| 8     | HARYANA             | 3                 | 0          | 0                  | 0   | 0                                     | 0   | 1           | 0              | 2            | 6            | 236.22          | 71.53           |
| 9     | HIMACHAL PRADESH    | 0                 | 2          | 8                  | 0   | 0                                     | 1   | 0           | 0              | 5            | 16           | 116.90          | 48.64           |
| 10    | JAMMU AND KASHMIR   | 0                 | 3          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 1            | 4            | 95.85           | 7.85            |
| 11    | JHARKHAND           | 403               | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 2            | 405          | 63.08           | 2.63            |
| 12    | KARNATAKA           | 67                | 143        | 56                 | 0   | 247                                   | 9   | 0           | 6              | 330          | 852          | 3822.87         | 121.36          |
| 13    | KERALA              | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00            | 0.00            |
| 14    | MADHYA PRADESH      | 573               | 22         | 4                  | 0   | 0                                     | 0   | 1           | 943            | 3331         | 3931         | 1241.21         | 940.46          |
| 15    | MAHARASHTRA         | 139               | 12         | 0                  | 0   | 11                                    | 13  | 0           | 3865           | 5052         | 5227         | 2115.20         | 1032.79         |
| 16    | MANIPUR             | 0                 | 0          | 0                  | 0   | 0                                     | 19  | 80          | 0              | 2            | 101          | 3774.99         | 5.25            |
| 17    | MEGHALAYA           | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00            | 0.00            |
| 18    | MIZORAM             | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00            | 0.00            |
| 19    | NAGALAND            | 0                 | 0          | 0                  | 1   | 0                                     | 0   | 15          | 0              | 77           | 93           | 1121.72         | 339.91          |
| 20    | ODISHA              | 299               | 0          | 0                  | 0   | 0                                     | 1   | 0           | 0              | 3957         | 4257         | 2971.50         | 2445.47         |
| 21    | PUDUCHERRY          | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00            | 0.00            |
| 22    | PUNJAB              | 1                 | 0          | 0                  | 0   | 0                                     | 0   | 68          | 0              | 7            | 76           | 755.86          | 199.06          |
| 23    | RAJASTHAN           | 3                 | 0          | 0                  | 0   | 0                                     | 0   | 14          | 0              | 0            | 17           | 257.58          | 84.97           |
| 24    | SIKKIM              | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00            | 0.00            |
| 25    | TAMIL NADU          | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 40           | 40           | 396.00          | 0.00            |
| 26    | TELANGANA           | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0           | 0              | 0            | 0            | 0.00            | 0.00            |
| 27    | TRIPURA             | 0                 | 0          | 2                  | 0   | 0                                     | 3   | 32          | 0              | 37           | 74           | 2651.75         | 62.18           |
| 28    | UTTAR PRADESH       | 1                 | 40         | 0                  | 0   | 0                                     | 0   | 0           | 0              | 7            | 48           | 15910.79        | 9725.00         |
| 29    | UTTARAKHAND         | 0                 | 0          | 0                  | 0   | 0                                     | 25  | 0           | 0              | 12           | 37           | 1321.42         | 450.75          |
| 30    | WEST BENGAL         | 0                 | 0          | 1                  | 0   | 0                                     | 1   | 0           | 0              | 0            | 2            | 199.47          | 0.00            |
|       | <b>Total</b>        | <b>1674</b>       | <b>403</b> | <b>74</b>          | <b>7</b>  | <b>258</b>                            | <b>86</b>   | <b>1708</b> | <b>4826</b>    | <b>16089</b> | <b>20299</b> | <b>55108.07</b> | <b>19593.65</b> |

\* Others May include Infiltration Rings,Sub-Surface Dykes,Others,Revival of traditional water harvesting structures,Flushing/Hydro-fracturing,Bore blasting and Others,Spring Source Development,Solar Pump/ Dual Pump (Solar)

Annexure referred in reply to Part (b) of the Lok Sabha Unstarred Q.No. 2705 dated 01.12.2016 regarding “Contamination of Ground Water”

## State wise Total Number Of Recharge Structures under NRDWP

Sanction Year:-2016-2017 State:-All State

\* All Amount in lakhs

| S.No. | State   | Pits And Trenches | Check Dams | Perco Lation Tanks | Point Source Recharging (Conversion Of Defunct Borewells) | Dug- Wells/ Injection/ Skimming Wells | Ooranies/ Village Ponds/ Traditional Water Bodies | Roof Top   | Recharge Shaft | Others*      | Total        | Estimated Cost  | Expenditure    |
|-------|---|-------------------|------------|--------------------|---|---------------------------------------|---|------------|----------------|--------------|--------------|-----------------|----------------|
| 1     | 2   | 3                 | 4          | 5                  | 6   | 7                                     | 8   | 9          | 10             | 11           | 12           | 13              | 14             |
| 1     | ANDAMAN and NICOBAR                           | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 2     | ANDHRA PRADESH<br>(Data under reconciliation) | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 3     | ARUNACHAL PRADESH                             | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 4     | ASSAM   | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 5     | BIHAR   | 2                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 1            | 3            | 2526.84         | 730.00         |
| 6     | CHATTISGARH                                   | 73                | 3          | 0                  | 27  | 0                                     | 0   | 173        | 22             | 2059         | 2335         | 892.33          | 80.32          |
| 7     | GUJARAT                                       | 2                 | 0          | 0                  | 0   | 0                                     | 0   | 10         | 0              | 82           | 94           | 434.65          | 29.30          |
| 8     | HARYANA                                       | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 9     | HIMACHAL PRADESH                              | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 10    | JAMMU AND KASHMIR                             | 1                 | 3          | 0                  | 0   | 0                                     | 2   | 0          | 0              | 0            | 6            | 83.60           | 0.00           |
| 11    | JHARKHAND                                     | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 12    | KARNATAKA                                     | 100               | 259        | 10                 | 0   | 17                                    | 1   | 0          | 0              | 338          | 725          | 2992.15         | 8.00           |
| 13    | KERALA  | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 14    | MADHYA PRADESH                                | 2029              | 10         | 0                  | 0   | 0                                     | 0   | 0          | 1556           | 3959         | 5998         | 2068.56         | 575.66         |
| 15    | MAHARASHTRA                                   | 19                | 1          | 0                  | 0   | 5                                     | 2   | 0          | 7056           | 8108         | 8135         | 3207.59         | 128.75         |
| 16    | MANIPUR<br>(Data under reconciliation)        | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 17    | MEGHALAYA                                     | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 18    | MIZORAM                                       | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 19    | NAGALAND                                      | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 20    | ODISHA  | 0                 | 0          | 0                  | 0   | 0                                     | 1   | 0          | 0              | 1114         | 1115         | 601.27          | 461.27         |
| 21    | PUDUCHERRY                                    | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 22    | PUNJAB  | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 28         | 0              | 12           | 40           | 195.33          | 28.56          |
| 23    | RAJASTHAN                                     | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 24    | SIKKIM  | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 25    | TAMIL NADU                                    | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 26    | TELANGANA<br>(Data under reconciliation)      | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 27    | TRIPURA                                       | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 0            | 0            | 0.00            | 0.00           |
| 28    | UTTAR PRADESH                                 | 0                 | 0          | 0                  | 0   | 0                                     | 0   | 0          | 0              | 38           | 38           | 12945.75        | 899.95         |
| 29    | UTTARAKHAND                                   | 16                | 0          | 0                  | 0   | 0                                     | 0   | 1          | 0              | 0            | 17           | 57.89           | 25.42          |
| 30    | WEST BENGAL                                   | 0                 | 0          | 0                  | 0   | 1                                     | 0   | 0          | 0              | 0            | 1            | 1062.55         | 0.00           |
|       | <b>Total</b>                                  | <b>2242</b>       | <b>276</b> | <b>10</b>          | <b>27</b>   | <b>23</b>                             | <b>6</b>  | <b>212</b> | <b>8634</b>    | <b>15711</b> | <b>18507</b> | <b>27068.51</b> | <b>2967.23</b> |

\* Others May include Infiltration Rings,Sub-Surface Dykes,Others,Revival of traditional water harvesting structures,Flushing/Hydro-fracturing,Bore blasting and Others,Spring Source Development,Solar Pump/ Dual Pump (Solar)





**ANNEXURE – III**

**Annexure referred in reply to Part (b) of the Lok Sabha Starred Q.No. 2705 dated 01.12.2016 regarding “Contamination of Ground Water”**

**State-wise details of Central Share released by Department of Land Resources under Integrated Watershed Management Programme / Watershed Development Component in the last 3 years and the current year**

(Amount in Rs. crore)

| S.No. | State             | Central Share Released |                      |                      |   |
|-------|-------------------|------------------------|----------------------|----------------------|---|
|       |                   | 2013-14 <sup>@</sup>   | 2014-15 <sup>@</sup> | 2015-16 <sup>#</sup> | 2016-17 <sup>#</sup><br>(upto 31-10-2016) |
| 1     | Andhra Pradesh    | 107.67                 | 163.28               | 86.73                | 83.09                                     |
| 2     | Arunachal Pradesh | 110.83                 | 0.00                 | 18.00                | 23.12                                     |
| 3     | Assam             | 116.60                 | 6.99                 | 45.00                | 0.00                                      |
| 4     | Bihar             | 15.42                  | 21.47                | 5.00                 | 19.19                                     |
| 5     | Chhattisgarh      | 26.00                  | 10.00                | 20.00                | 34.96                                     |
| 6     | Gujarat           | 60.0                   | 72.34                | 100.00               | 57.48                                     |
| 7     | Haryana           | 14.20                  | 26.97                | 6.91                 | 12.82                                     |
| 8     | Himachal Pradesh  | 46.08                  | 0.00                 | 20.00                | 35.40                                     |
| 9     | Jammu & Kashmir   | 0.0                    | 51.43                | 0.00                 | 0.00                                      |
| 10    | Jharkhand         | 29.40                  | 0.00                 | 20.00                | 0.00                                      |
| 11    | Karnataka         | 586.11                 | 125.43               | 125.00               | 69.70                                     |
| 12    | Kerala            | 0.0                    | 15.16                | 20.00                | 11.37                                     |
| 13    | Madhya Pradesh    | 135.57                 | 303.98               | 150.00               | 89.27                                     |
| 14    | Maharashtra       | 180.35                 | 197.91               | 250.00               | 80.34                                     |
| 15    | Manipur           | 30.28                  | 11.10                | 9.00                 | 0.00                                      |
| 16    | Meghalaya         | 28.06                  | 37.16                | 18.00                | 11.56                                     |
| 17    | Mizoram           | 69.18                  | 75.81                | 8.87                 | 16.06                                     |
| 18    | Nagaland          | 74.67                  | 95.09                | 27.00                | 28.20                                     |
| 19    | Odisha            | 136.91                 | 248.79               | 67.50                | 63.38                                     |
| 20    | Punjab            | 15.44                  | 0.00                 | 7.95                 | 0.00                                      |
| 21    | Rajasthan         | 0.0                    | 403.08               | 200.00               | 199.35                                    |
| 22    | Sikkim            | 0.0                    | 0.00                 | 6.30                 | 0.00                                      |
| 23    | Tamil Nadu        | 168.55                 | 124.02               | 75.00                | 0.00                                      |
| 24    | Telangana         | 75.58                  | 124.58               | 70.00                | 0.00                                      |
| 25    | Tripura           | 47.81                  | 19.04                | 20.89                | 12.47                                     |
| 26    | Uttarakhand       | 0.0                    | 49.77                | 25.68                | 11.23                                     |
| 27    | Uttar Pradesh     | 88.09                  | 75.39                | 75.00                | 0.00                                      |
| 28    | West Bengal       | 0.0                    | 25.85                | 10.00                | 24.06                                     |
|       | <b>Total</b>      | <b>2162.80</b>         | <b>2284.63</b>       | <b>1487.83</b>       | <b>883.05</b>                             |

<sup>@</sup> Released under the erstwhile Integrated Watershed Management Programme (IWMP), which was amalgamated as the Watershed Development Component (WDC) of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) from 2015-16

<sup>#</sup>Released under the Watershed Development Component (WDC) of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

Note: 1) WDC-PMKSY is not operational in Union Territories.

2) There is no sanctioned project in Goa.

**ANNEXURE – IV**

Annexure referred in reply to Part (b) of the Lok Sabha Starred Q.No. 2705 dated 01.12.2016 regarding  
“Contamination of Ground Water”

State-wise details of expenditure incurred on Public Works relating to Natural Resources Management under  
MGNREGA

| S.No. | State               | Public Works Relating To Natural Resources Management |                   |                   |                             |
|-------|---------------------|---|-------------------|-------------------|-----------------------------|
|       |                     | Expenditure on NRM Works (Takenup)<br>(Rs. in lakhs)  |                   |                   |                             |
|       |                     | 2013-14   | 2014-15           | 2015-16           | 2016-17<br>as on 25/11/2016 |
| 1     | Andaman And Nicobar | 0.00  | 0.00              | 0.00              | 0.00                        |
| 2     | Andhra Pradesh      | 56003.81  | 83119.04          | 219432.52         | 189981.93                   |
| 3     | Arunachal Pradesh   | 98.22   | 399.54            | 1868.42           | 2557.24                     |
| 4     | Assam               | 9758.91   | 11433.52          | 18665.37          | 38223.79                    |
| 5     | Bihar               | 40169.25  | 33835.59          | 61890.80          | 57977.07                    |
| 6     | Chhattisgarh        | 37116.44  | 65617.32          | 67409.62          | 114121.39                   |
| 7     | Goa                 | 43.99   | 141.35            | 102.46            | 61.69                       |
| 8     | Gujarat             | 8966.14   | 11585.08          | 21996.53          | 27798.67                    |
| 9     | Haryana             | 13161.48  | 8310.48           | 8366.58           | 12505.24                    |
| 10    | Himachal Pradesh    | 25923.62  | 19775.22          | 17392.75          | 14260.47                    |
| 11    | Jammu And Kashmir   | 8744.96   | 7219.05           | 19881.00          | 10137.48                    |
| 12    | Jharkhand           | 26845.20  | 33504.56          | 47635.36          | 64774.43                    |
| 13    | Karnataka           | 63559.02  | 53394.09          | 66917.40          | 73188.61                    |
| 14    | Kerala              | 63726.45  | 96234.91          | 85322.61          | 87527.47                    |
| 15    | Lakshadweep         | 21.34   | 16.26             | 5.12              | 0.00                        |
| 16    | Madhya Pradesh      | 62363.71  | 71975.88          | 63030.27          | 77220.00                    |
| 17    | Maharashtra         | 23765.64  | 58760.03          | 71854.35          | 57118.64                    |
| 18    | Manipur             | 1774.11   | 6857.71           | 8190.30           | 14817.83                    |
| 19    | Meghalaya           | 2876.07   | 5535.52           | 5948.88           | 15608.11                    |
| 20    | Mizoram             | 1301.22   | 5271.73           | 18758.93          | 3214.07                     |
| 21    | Nagaland            | 1645.17   | 1002.40           | 5017.35           | 13390.84                    |
| 22    | Odisha              | 20831.79  | 43189.39          | 78241.99          | 79490.56                    |
| 23    | Puducherry          | 740.40  | 465.00            | 804.47            | 759.38                      |
| 24    | Punjab              | 6644.96   | 9063.86           | 13969.24          | 20517.96                    |
| 25    | Rajasthan           | 60465.18  | 127798.51         | 162566.90         | 165193.72                   |
| 26    | Sikkim              | 2717.34   | 2000.17           | 3013.84           | 3563.56                     |
| 27    | Tamil Nadu          | 273071.92   | 247359.05         | 383893.37         | 299741.51                   |
| 28    | Telangana           | 75.23   | 41262.74          | 89834.18          | 60227.42                    |
| 29    | Tripura             | 45119.33  | 48183.66          | 75173.24          | 51531.31                    |
| 30    | Uttar Pradesh       | 41211.54  | 57814.94          | 122144.42         | 188714.19                   |
| 31    | Uttarakhand         | 9293.70   | 8320.78           | 13238.56          | 15272.69                    |
| 32    | West Bengal         | 103911.95   | 165325.65         | 213617.76         | 227503.12                   |
|       | <b>Total</b>        | <b>1011948.09</b>                                     | <b>1324773.03</b> | <b>1966184.59</b> | <b>1987000.39</b>           |

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