

GOVERNMENT OF INDIA  
MINISTRY OF WATER RESOURCES,  
RIVER DEVELOPMENT & GANGA REJUVENATION  
**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 1405**  
ANSWERED ON 30.07.2018

**STUDY ON GROUNDWATER CONTAMINATION**

1405. SHRI NARAYAN LAL PANCHARIYA

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

- (a) whether Government has conducted any survey/study on contamination of groundwater, especially in Rajasthan, if so, the details thereof and if not, the reasons therefor;
- (b) the possible causes of contamination of groundwater and steps taken to prevent such contamination;
- (c) areas in Rajasthan afflicted with contaminated groundwater; and
- (d) whether Government is considering any special measures to prevent contamination of groundwater in water-scarce States, including Rajasthan in view of shortage of drinking water?

**ANSWER**

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

(SHRI ARJUN RAM MEGHWAL)

(a) to (d) Central Ground Water Board (CGWB) regularly monitors ground water quality of shallow aquifers on a regional scale, once every year. Ground water quality data generated during various scientific studies and ground water quality monitoring indicate that the ground water in major part of the country is potable. However, some parts of various states are contaminated by Salinity, Arsenic, Fluoride, Iron, Nitrate and Heavy metals beyond the permissible limits of BIS. State-wise details are given in **Annexure I**. The name of the districts affected with ground water contamination in Rajasthan State is given in **Annexure II**.

The possible sources of contamination of ground water are either geogenic or anthropogenic in nature. Anthropogenic contamination of ground water is due to industrial discharges, landfills, diffused sources of pollution like fertilizers and pesticides from agricultural fields etc.

Steps taken to check the ground water pollution are –

- (i). Control of industrial pollution under the provision of Water (Prevention and Control of Pollution) Act, 1974 by consent mechanism being applied by SPCBs/ PCCs.
- (ii). A mutually agreed time targeted programme is implemented under Corporate Responsibility on Environment Protection (CREP).
- (iii). Establishment of Common Effluent Treatment Plants (CETPs) for cluster of Small Scale Industrial units.
- (iv). Continuous water quality monitoring systems are being established on industrial units in the country, through the directives issued by CPCB, for getting real time information on the effluent quality.

For improving the coverage of safe drinking water to rural population, the Ministry of Drinking Water and Sanitation supplements the efforts of the states by providing them with technical and financial assistance through the centrally sponsored National Rural Drinking Water Programme (NRDWP). It is the State Governments who plan, design, approve, execute and operate & maintain the schemes for providing safe drinking water to rural population.

Annexure referred to in reply to part (a) to (d) of Unstarred Question No. 1405 to be answered in Rajya Sabha on 30.07.2018 regarding “Study on groundwater contamination”

**States Wise Details of Affected Districts with Ground Water Contamination**

Sl No	Name of the State/UTs	Salinity (EC above 3000 micro mhos/cm) (EC : Electrical Conductivity)	Fluoride ( above 1.5 mg/l)	Nitrate (above 45 mg/l)	Arsenic (above 0.01 mg/l)	Iron (above 1mg/l )	Heavy metals		
							Lead (above 0.01 mg/l)	Cadmium (above 0.003 mg/l)	Chromium (above 0.05 mg/l)
1	Andhra Pradesh	11	11	13	3	7	-	-	-
2	Arunachal Pradesh	-	-	-	-	4	-	-	-
3	Assam	-	6	-	19	18	-	-	-
4	Bihar	-	13	10	23	19	-	-	-
5	Chhattisgarh	-	13	12	1	4	1	1	1
6	Delhi	7	7	8	2	-	3	1	4
7	Goa	-	-	-	-	-	-	-	-
8	Gujarat	21	19	21	12	6	-	-	-
9	Haryana	15	20	19	15	17	17	7	1
10	Himachal Pradesh	-	-	6	1	-	-	-	-
11	Jammu & Kashmir	-	2	4	3	6	3	1	-
12	Jharkhand	-	12	11	1	6	1	-	-
13	Karnataka	29	29	22	2	22	-	-	-
14	Kerala	4	5	11	-	15	2	-	1
15	Madhya Pradesh	16	39	50	8	42	16	-	-
16	Maharashtra	20	17	30	-	20	19	-	-
17	Manipur	-	-	-	2	1	-	-	-
18	Meghalaya	-	-	-	-	3	-	-	-
19	Nagaland	-	-	-	-	1	-	-	-
20	Odisha	7	25	28	1	21	-	-	1
21	Punjab	9	19	20	10	9	6	8	10
22	Rajasthan	30	33	33	1	33	4	-	-
23	Tamil Nadu	23	19	27	9	2	3	1	5
24	Telangana	7	9	10	1	8	2	1	1
25	Tripura	-	-	-	-	4	-	-	-
26	Uttar Pradesh	9	30	46	29	15	10	2	4
27	Uttarakhand	-	-	3	-	-	-	-	-
28	West Bengal	4	7	2	9	15	6	2	2
	<b>UT s</b>	-	-	-	-	-	-	-	-
1	Andaman & Nicobar	-	-	-	-	1	-	-	-
2	Chandigarh	-	-	-	-	-	-	-	-
3	Dadra & Nagar Haveli	-	-	-	-	-	-	-	-
4	Daman & Diu	-	-	-	1	-	-	-	-
5	Pondicherry	-	-	-	-	-	-	-	-
	<b>TOTAL No of Districts</b>	<b>212</b>	<b>335</b>	<b>386</b>	<b>153</b>	<b>301</b>	<b>93</b>	<b>24</b>	<b>30</b>
	<b>TOTAL No of State</b>	<b>15</b>	<b>20</b>	<b>21</b>	<b>21</b>	<b>26</b>	<b>14</b>	<b>9</b>	<b>10</b>

**Annexure II**

Annexure referred to in reply to part (a) to (d) of Unstarred Question No. 1405 to be answered in Rajya Sabha on 30.07.2018 regarding “Study on groundwater contamination”

**Details of Affected Districts with Ground Water Contamination by different Chemical Constituents**

State/UT	Salinity (EC above 3000 µS/cm) (EC :Electrical Conductivity)	Fluoride (above 1.5 mg/l)	Nitrate (above 45mg/l)	Arsenic (above 0.01mg/l)	Iron (above 1mg/l)	Heavy metals :Lead (above 0.01 mg/l) Cadmium (above 0.003mg/l) Chromium (above 0.05 mg/l)
Rajasthan	Ajmer, Alwar, Baran, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittorgarh, Churu, Dausa, Dhaulpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Rajasamand, Sawai-Madhampur, Sikar, Sirohi, Tonk, Udaipur	Ajmer, Alwar, Banswara, Barmer, Bharatpur, Baran, Bhilwara, Bikaner, Bundi, Chittaurgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Pratapgarh, Rajsamand, Sirohi, Sikar, Sawai Madhopur, Tonk, Udaipur	Ajmer, Alwar, Banswara, Baran, Barmer, Bundi, Bharatpur, Bhilwara, Bikaner, Chittaurgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Partapgarh, Rajasamand, Sirohi, Sikar, Sawai Madhopur, Tonk, Udaipur	Ganganagar	Ajmer, Alwar, Banswara, Baran, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittaurgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Pratapgarh, Rajsamand, Sikar, Sawai Madhopur, Sirohi, Tonk, Udaipur	Lead: Jhunjhunu Dist (Khetri Copper Deposit), Pali, Jaipur (Sambhar Lake, Sanganer