

GOVERNMENT OF INDIA  
MINISTRY OF WATER RESOURCES,  
RIVER DEVELOPMENT & GANGA REJUVENATION  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 3485**  
ANSWERED ON 23.03.2017

**SUSTAINABLE USE OF WATER**

3485. SHRI C. MAHENDRAN

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

- (a) the current status of water resources in comparison to normal year reservoir storages and groundwater levels;
- (b) whether there are growing concerns about the sustainable use of ground/surface water with respect to emerging issues of inequity of water distribution and access in the country and if so, the details thereof;
- (c) whether the rural areas are struggling with quality of water and if so, the details thereof; and
- (d) the steps taken/to be taken by the Government in this direction?

**ANSWER**

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

(DR. SANJEEV KUMAR BALYAN)

(a) Central Water Commission (CWC) monitors live storage status of 91 reservoirs of the country on weekly basis and issues weekly bulletins. The total live storage capacity of these 91 reservoirs is 157.799 BCM which is about 62% of the live storage capacity of 253.388 BCM. As per reservoir storage bulletin dated 16.03.2017, live storage available in these reservoirs is 58.03 BCM, which is 37% of total live storage capacity of these reservoirs. However, last year the live storage available in these reservoirs for the corresponding period was 47.54 BCM and the average of last 10 years live storage was 57.8 BCM. Thus, the live storage available in 91 reservoirs as per 16.03.2017 Bulletin is 122% of the live storage of corresponding period of last year and 100% of storage of average of last ten years.

As per the ground-water-level data, monitored by Central Ground Water Board (CGWB) under this Ministry, Pre-monsoon (April/ May, 2016) water level data when compared with the decadal average (2006-2015) indicate that 66% of the wells have registered decline in ground water level in all the States/UTs of the country.

(b) Yes, Madam. River basin being the natural hydrological unit, total water resources availability is assessed river basin wise. The average annual per capita water availability in the years 2001 and 2011 was assessed as 1820 cubic meters and 1545 cubic meters respectively which may reduce further to 1341 and 1140 in the years 2025 and 2050 respectively. In view of growing population, the per capita water availability in India is reducing progressively.

Annual per-capita water availability of less than 1700 cubic meters is considered as water stressed condition, whereas annual per-capita water availability below 1000 cubic meters is considered as a water scarcity condition. Due to temporal and spatial variability of rainfall, many regions / states receive less than average rainfall and may be considered as water stressed or water scarce.

As per the latest assessment of dynamic ground water resources of India (as on 31st March 2013) carried out jointly by Central Ground Water Board and State Ground Water Departments, the total annual replenishable ground water

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resources of the have been estimated as 447 billion cubic meter (BCM). Keeping 36 BCM for natural discharge, the net annual ground water availability for entire country is 411 BCM. The state-wise ground water resources availability, utilization and stage of development India (As on 31st March 2013) are given in **Annexure I**.

(c) The surveys and the ground water quality studies carried out by CGWB and State Departments have shown that ground water in major parts of the country is potable. However, sporadic occurrence of contaminants like Arsenic, Fluoride, Nitrate etc. in ground water above the permissible limits prescribed by Bureau of Indian Standards (BIS) have been reported in some parts of the country including the rural areas. The names of the districts state wise which are partly affected by different contaminants in ground water are given in **Annexure II**.

(d) Water being state subject, measures for water conservation and management are taken by respective state Governments depending on their priority and resources. In order to supplement the efforts of state governments, Central Government provides technical and financial assistance through various schemes and programmes.

Some of such interventions are as follows:

- CGWB monitors ground water quality of shallow aquifers on a regional scale, once every year during pre-monsoon (April/May). Ground water quality data generated during various scientific studies and ground water quality monitoring is utilized to identify the extent of ground water contamination in different parts of the country. CGWB carries out exploratory drilling to delineate contaminant free aquifer zones and successful exploratory wells are handed over to the concerned State agencies for purposeful utilization. Since in-situ treatment of contaminated aquifers due to presence of Arsenic, Fluoride, and Nitrate is difficult, remedial measures are concentrated on providing alternate sources of water supply.
- The CGWB under the Ministry of Water Resources, RD & GR has carried out Demonstrative Rain Water Harvesting and Artificial Recharge Projects during XI Plan under the Central Sector Scheme of “Ground Water Management & Regulation” in priority areas. The projects aimed at providing technical assistance to State Governments by demonstration of rainwater harvesting & recharge technology for replicating the same in similar hydrogeological environment. During the XI Plan, 133 demonstrative recharge projects were approved for construction of artificial recharge structures in 22 States.
- A conceptual document entitled “Master Plan for Artificial Recharge to Ground Water in India” has been prepared by CGWB during the year 2013, which envisages construction of different types of Artificial Recharge and Rainwater Harvesting structures in the Country in an area of 9,41,541 square km by harnessing surplus monsoon runoff to augment ground water resources. The Master Plan has been circulated to all State Governments for implementation.
- The National Water Policy (2012) has been formulated by Ministry of Water Resources, RD & GR which inter-alia advocates conservation, promotion and protection of water and highlights the need for augmenting the availability of water through direct use of rainfall. The National Water Policy (2012) has been forwarded to all State Governments/ UTs and concerned Ministries/ Departments of Central Government for appropriate action.
- Central Government has launched the National Water Mission (NWM) with the objective of conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management. Goals of NWM include “Promotion of citizen and state actions for water conservation, augmentation and preservation” and “Increasing water use efficiency by 20%”.

**Annexure I**

(Annexure referred to in reply to part (b) of the Lok Sabha Unstarred Question No. 3485 to be answered on 23.03.2017 regarding "Sustainable use of Water")

STATE-WISE GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT INDIA (As on 31st March 2013)														
Sl. No.	States / Union Territories	Annual Replenishable Ground Water Resource				Total	Natural Discharge during non-monsoon season	Net Annual Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for future irrigation use	Stage of Ground Water Development (%)
		Monsoon Season		Non-monsoon Season					Irrigation	Domestic and industrial uses	Total			
		Recharge from rainfall	Recharge from other sources	Recharge from rainfall	Recharge from other sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	<b>States</b>													
1	Andhra Pradesh	8.97	4.25	3.21	3.97	20.39	1.91	18.48	7.29	0.81	8.10	1.64	10.21	44
2	Arunachal Pradesh	3.340	0.0003	1.092	0.001	4.433	0.443	3.990	0.002	0.007	0.01	0.020	3.967	0.23
3	Assam	20.56	1.82	9.22	0.49	32.11	3.21	28.90	4.06	0.68	4.74	0.84	24.00	16
4	Bihar	20.66	3.36	3.48	3.81	31.31	2.82	28.49	10.36	2.37	12.73	0.60	17.52	45
5	Chhattisgarh	10.11	0.76	0.87	1.06	12.80	0.90	11.90	3.76	0.64	4.40	0.76	7.38	37
6	Delhi	0.09	0.02	0.014	0.22	0.34	0.03	0.31	0.14	0.25	0.39	0.25	0.02	127
7	Goa	0.15	0.011	0.01	0.08	0.24	0.10	0.15	0.02	0.03	0.05	0.04	0.09	37
8	Gujarat	13.93	3.22	0.00	3.71	20.85	1.07	19.79	12.30	1.14	13.44	1.46	6.77	68
9	Haryana	3.62	3.10	1.03	3.60	11.36	1.06	10.30	13.32	0.60	13.92	0.56	-3.58	135
10	Himachal Pradesh	0.40	0.02	0.11	0.03	0.56	0.03	0.53	0.16	0.11	0.27	0.07	0.30	51
11	Jammu & Kashmir	1.22	2.69	0.79	0.55	5.25	0.43	4.82	0.20	0.98	1.18	1.07	3.55	24
12	Jharkhand	5.61	0.73	0.06	0.16	6.56	0.57	5.99	0.63	0.72	1.35	0.17	5.19	23
13	Karnataka	6.74	4.18	2.67	3.40	17.00	2.16	14.83	8.76	0.99	9.76	1.49	5.55	66
14	Kerala	4.51	0.04	0.59	1.13	6.27	0.60	5.66	1.18	1.45	2.63	1.55	2.93	47
15	Madhya Pradesh	28.59	1.27	0.82	5.30	35.98	1.82	34.16	17.95	1.41	19.36	2.35	13.86	57
16	Maharashtra	21.96	1.64	1.83	7.76	33.19	1.71	31.48	15.93	1.14	17.07	2.21	13.72	54
17	Manipur	0.244	0.010	0.201	0.019	0.474	0.047	0.426	0.004	0.001	0.004	0.049	0.374	1.01
18	Meghalaya	3.05	0.00	0.15	0.107	3.31	0.33	2.98	0.0080	0.0040	0.0120	0.207	2.76	0.4
19	Mizoram	0.02899	Negligible	0.01042	Negligible	0.03942	0.00394	0.03548	0	0.00104	0.00104	0.00238	0.0331	2.9
20	Nagaland	1.30	0	0.64	0	1.94	0.194	1.75	0.00	0.03	0.03	0.01	1.74	2.0
21	Odisha	11.29	2.53	1.33	2.63	17.78	1.09	16.69	4.14	0.87	5.02	1.35	11.20	30
22	Punjab	5.75	13.21	1.32	5.64	25.91	2.52	23.39	34.05	0.77	34.81	0.97	-11.63	149

## STATE-WISE GROUND WATER RESOURCES AVAILABILITY, UTILIZATION AND STAGE OF DEVELOPMENT INDIA (As on 31st March 2013)

(in bcm)														
Sl. No.	States / Union Territories	Annual Replenishable Ground Water Resource				Natural Discharge during non-monsoon season	Net Annual Ground Water Availability	Annual Ground Water Draft			Projected demand for Domestic and Industrial uses upto 2025	Ground Water Availability for future irrigation use	Stage of Ground Water Development (%)	
		Monsoon Season		Non-monsoon Season				Total	Irrigation	Domestic and industrial uses				Total
		Recharge from rainfall	Recharge from other sources	Recharge from rainfall	Recharge from other sources									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
23	Rajasthan	9.06	0.69	0.27	2.49	12.51	1.26	11.26	13.79	1.92	15.71	2.32	0.90	140
24	Sikkim	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Tamil Nadu	7.12	9.87	1.52	2.15	20.65	2.07	18.59	12.98	1.38	14.36	1.53	4.08	77
26	Telangana	8.13	2.12	1.65	2.84	14.74	1.35	13.39	7.00	0.76	7.77	1.55	4.83	58
27	Tripura	1.141	0.000	0.738	0.593	2.471	0.202	2.269	0.093	0.072	0.165	0.200	1.976	7.3
28	Uttar Pradesh	41.97	11.52	4.60	18.25	76.34	4.75	71.58	48.35	4.41	52.76	6.44	19.01	74
29	Uttarakhand	1.10	0.22	0.24	0.43	2.00	0.03	1.97	0.84	0.15	0.99	0.30	0.82	50
30	West Bengal	18.71	5.26	1.51	3.85	29.33	2.77	26.56	10.84	1.00	11.84	1.53	14.19	45
	<b>Total States</b>	<b>259.33</b>	<b>72.54</b>	<b>39.98</b>	<b>74.28</b>	<b>446.14</b>	<b>35.49</b>	<b>410.65</b>	<b>228.16</b>	<b>24.71</b>	<b>252.87</b>	<b>31.54</b>	<b>161.76</b>	<b>62</b>
	<b>Union Territories</b>													
1	Andaman & Nicobar	0.38	0.04	0.0002	0.00005	0.420	0.0420	0.378	0.0001	0.0035	0.0037	0.016	0.361	1
2	Chandigarh	0.015	0.0004	0.005	0.001	0.022	0.0022	0.0194	0	0	0	0	0	0
3	Dadara & Nagar Haveli	0.054	0.002	0.010	0.004	0.070	0.007	0.063	0.008	0.013	0.020	0.014	0.042	32
4	Daman & Diu	0.012	0.001	0.000	0.001	0.015	0.001	0.014	0.008	0.002	0.010	0.003	0.003	70
5	Lakshdweep	0	0	0	0	0.01055	0.00704	0.00350	0.00000	0.00237	0.00237	0	0	68
6	Puducherry	0.095	0.060	0.009	0.028	0.193	0.019	0.174	0.124	0.029	0.153	0.047	0.053	88
	<b>Total UTs</b>	<b>0.56</b>	<b>0.10</b>	<b>0.024</b>	<b>0.035</b>	<b>0.73</b>	<b>0.08</b>	<b>0.65</b>	<b>0.139</b>	<b>0.050</b>	<b>0.189</b>	<b>0.08</b>	<b>0.46</b>	<b>29</b>
	<b>Grand Total</b>	<b>259.89</b>	<b>72.65</b>	<b>40.01</b>	<b>74.31</b>	<b>446.87</b>	<b>35.56</b>	<b>411.30</b>	<b>228.30</b>	<b>24.76</b>	<b>253.06</b>	<b>31.62</b>	<b>162.22</b>	<b>62</b>

**Annexure II**

(Annexure referred to in reply to part (c) of the Lok Sabha Unstarred Question No. 3485 to be answered on 23.03.2017 regarding “Sustainable use of Water”)

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

S. No.	State/ UT	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	<b>Andhra Pradesh</b>	Srikakulam, Visakhapatnam, East-Godavari, West-Godavari, Krishna, Guntur, Prakasam, Nellore, Kadapa, Kurnool, Ananthapur,	Visakhapatnam, West-Godavari, Krishna, Guntur, Prakasam, Nellore, Chittoor, Kadapa, Kurnool, Ananthapur, Srikakulam	Srikakulam, Vizianagaram, Visakhapatnam, East-Godavari, Krishna, West-Godavari, Krishna, Guntur, Prakasam, Nellore, Chittoor, Kadapa, Kurnool, Ananthapur,	Guntur, Kurnool, Nellore	Visakhapatnam, Krishna, Guntur, Nellore, Kurnool, Chittoor, Cuddapah,	
2	<b>Telangana</b>	Adilabad, Nizamabad, Karimnagar, Warangal, Khammam, Medak, Mehboob Nagar, Nalgonda,	Adilabad, Karimnagar, Khammam, Warangal, Mahabubnagar, Medak, Nalgonda, Rangareddy, Nizamabad	Adilabad, Nizamabad, Karimnagar, Warangal, Khammam, Hyderabad, Mahabubnagar, Medak, Nalgonda, Rangareddy,	Nalgonda,	Adilabad, Hyderabad, Karimnagar, Mahabubnagar, Medak, Nalgonda, Nizamabad, Ranga Reddy	<b>Lead</b> : Rangareddy, Nalgonda <b>Cadmium</b> : Rangareddy <b>Chromium</b> : Rangareddy
3	<b>Assam</b>		Goalpara, Kamrup, KarbiAnglong, Naugaon Golaghat, Karimganj		Sivsagar, Jorhat, Golaghat, Sonitpur, Lakhimpur, Dhemaji, Hailakandi, Karimganj, Cachar, Barpeta, Bongaigaon, Goalpara, Dhubri, Nalbari, Nagaon, Morigaon, Kamrup, Darrang & Baksha	Cachar, Darrang, Dhemaji, Dhubri, Goalpara, Golaghat, Hailakandi, Jorhat, Kamrup, KarbiAnglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, Nagaon, Nalbari, Sibsagar, Sonitpur	
4	<b>Arunachal Pradesh</b>					Changlang, East Siang, Lohit, Papumpare	
5	<b>Bihar</b>		Aurangabad, Banka, Bhagalpur, Gaya, Jamui, Kaimur (Bhabua), Munger, Nawada, Rohtas, Jahanabad, Lakhisarai, Sheikhpura, Nalanda	Aurangabad, Banka, Bhagalpur, Bhojpur, Darbhanga, Kaimur (Bhabua), Patna, Rohtas, Saran, Siwan	Begusarai, Bhagalpur, Bhojpur, Buxar, Darbhanga, Katihar, Khagaria, Kishanganj, Lakhisarai, Munger, Patna, Purnea, Samastipur, Saran,	Aurangabad, Begusarai, Bhojpur, Buxar, East Champaran, Gopalganj, Katihar, Khagaria, Kishanganj, Lakhisarai, Madhepura, Muzaffarpur, Nawada, Rohtas,	

S. No.	State/ UT	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)
					Vaishali E.Champaran, Gopalganj, Lohardaga, Madhepura, Muzaffarpur Saharsa, Siwan, W Champaran	Saharsa, Samastipur, Siwan, Supaul, West Champaran	
6	Chhattisgarh		Bastar, Balod , Balrampur, Bemetra, Bijapur , Durg, Kanker, Kondagaon, Korba, Koriya, Raigarh, Surajpur, Surguja	Bastar, Bilaspur, Dantewada, Dhamtari, Jashpur, Kanker, Kawardha, Korba, Mahasamund, Raigarh, Raipur, Rajnandgaon	Rajnandgaon	Bastar, Dantewada, Kanker, Koriya,	Lead: Korba Cadmium: Korba Chromium:Korba
7	Delhi	New Delhi, North , South, East West, North West, South West	East Delhi, New Delhi, North West Delhi, South Delhi, South West Delhi North Delhi, West Delhi	East Delhi, Central Delhi, New Delhi, North Delhi, North West Delhi, South Delhi, South West Delhi, West Delhi	East, North east		Lead : Along Najafgarh drain in North, West and South-west districts Cadmium : Southwest Chromium : Northwest, South, New Delhi, East
8	Goa					North Goa , South Goa	
9	Gujarat	Ahmedabad, Amreli, Anand, Banaskantha, Bharuch, Bhavnagar, Dahod, Jamnagar, Junagadh, Kachchh, Kheda, Mahesana, Navsari, Patan, Porbandar, Rajkot, Sabarkantha, Surat, Surendranagar, Vadodara, Narmada	Ahmedabad, Amreli, Anand, Banaskantha, Bharuch, Bhavnagar, Dahod, Gandhinagar, Jamnagar, Junagadh, Kachchh, Mehesana, Panchmahals, Patan, Porbandar, Rajkot, Sabarkantha, Surendranagar, Vadodara	Ahmedabad, Amreli, Anand, Banaskantha, Bharuch, Bhavnagar, Dahod, Jamnagar, Junagadh, Kachchh, Kheda, Mehesana, Narmada, Navsari, Panchmahals, Patan, Porbandar, Rajkot, Sabarkantha, Surat, Surendranagar, Vadodara	Amreli, Anand, Bharuch, Bhavnagar, Dahod, Gandhinagar, Kachchh, Mehesana, Patan, Rajkot, Surendranagar, Vadodara	Ahmedabad, Banaskantha, Bhavnagar, Kachchh, Mehesana,Narmada,	
10	Haryana	Ambala, Bhiwani, Faridabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Karnal, Mohendragarh, Panipat, Rewari, Rohtak, Sirsa, Sonapat	Ambali, Bhiwani, Fatehabad, Faridabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Karnal, Kurukshetra, Mahendergarh,	Ambala, Bhiwani, Faridabad, Fatehabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Karnal,	Ambala, Bhiwani, Faridabad, Fatehabad, Hissar, Jhajjar, Jind, Karnal, Panipat, Rohtak, Sirsa, Sonapat,	Ambala, Bhiwani, Faridabad, Fatehabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Karnal, Kurukshetra, Mahendargarh, Panipat,	Lead: Ambala, Bhiwani, Faridabad, Fatehabad, Gurgaon, Hissar, Jhajjar, Jind, Kaithal, Karnal, Mahendragarh, Panchkula, Panipat,

S. No.	State/ UT	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)
			Panchkula, Palwal, Panipat, Rewari, Rohtak, Sirsa, Sonapat, Yamuna Nagar	Kurukshetra, Mahendargarh, Panchkula, Panipat, Rewari, Rohtak, Sirsa, Sonapat, Yamuna Nagar	Yamunanagar, Mahendargarh, Palwal	Rohtak, Sirsa, Sonapat, Yamuna Nagar	Rewari, Rohtak, Sirsa, Sonapat. <b>Cadmium:</b> Bhiwani, Gurgaon, Jhajjar, Jind, Kaithal, Rewari, Rohtak. <b>Chromium:</b> Fatehabad
11	Himachal Pradesh			Una, Solan, Hamirpur, Kangra, Mandi, Kullu	Kangra		
12	Jammu & Kashmir		Jammu, Kathua	Jammu, Kathua, Anantnag, Kupwara	Jammu, Kathua, Rajouri	Baramulla, Budgam, Kathua, Kupwara, Pulwama, Srinagar	<b>Lead:</b> Jammu (Gangyal) Bari Brahma, Kathua <b>Cadmium:</b> Kathua
13	Jharkhand		Bokaro, Dhanbad, Garhwa, Giridih, Godda, Gumla, Koderma, Pakur, Palamu, Ranchi, Sahebganj, Khunti	Chatra, Garhwa, Godda, Gumla, Lohardaga, Pakur, Palamu, Paschimi Singhbhum, Purbi Singhbhum, Ranchi, Sahibganj	Sahebganj	Chatra, Deoghar, East Singhbhum, Giridih, Ranchi, West Singhbhum	<b>Lead:</b> Jamshedpur
14	Karnataka	Bagalkote, Bangalore-Rural, Bangalore-Urban, Belgaum, Bellary, Bijapur, Chamarajnaraga, Chikballapur, Chikmagalur, Chitradurga, Dakshina Kannada, Davanagere, Dharwad, Gadag, Gulbarga, Hassan, Haveri, Kodagu/ Coorg, Kolar, Koppal, Mandya, Mysore, Raichur, Ramanagara, Shimoga, Tumkur, Udupi, Uttara Kannada, Yadgir	Bagalkot, Bangalore(Rural), Bangalore(Urban), Belgaum, Bellary, Bidar, Bijapur, Chikaballapur, Chamarajanagar, Chikmagalur, Chitradurga, Davanagere, Dharwad, Dakshina Kannada, Gadag, Gulbarga, Hassan, Haveri, Kolar, Koppal, Mandya, Mysore, Raichur, Ramnagara, Shimoga, Tumkur, Yadgir, Uttara Kannada, Udupi	Bagalkot, Bangalore, Belgaum, Bellary, Bidar, Bijapur, Chikmagalur, Chitradurga, Davanagere, Dharwad, Gadag, Gulbarga, Hassan, Haveri, Kodagu, Kolar, Koppal, Mandya, Raichur. Shimoga, Udupi, Uttara Kannada	Raichur and Yadgir district	Bagalkot, Bangalore, Belgaum, Bellary, Bidar, Bijapur, Chikmagalur, Chitradurga, Dakshina Kannada, Davanagere, Gulbarga, Hassan, Haveri, Kodagu, Kolar, Koppal, Mysore, Raichur, Shimoga, Tumkur, Udupi, Uttara Kannada	
15	Kerala	Trivandrum, Kollam, Kottayam, Ernakulam	Palakkad, Alappuzha, Idukki, Ernakulam, Thiruvananthapuram	Alappuzha, Idukki, Kollam, Kottayam,		Alappuzha, Ernakulam, Idukki, Kannur, Kasaragod, Kollam, Kottayam, Kozhikode,	<b>Lead:</b> Ernakulam, Kollam <b>Chromium:</b> Kollam

S. No.	State/ UT	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)
				Kozhikode, Malappuram, Palakkad, Pathanamthitta, Thiruvananthapuram, Thrissur, Wayanad		Malappuram, Palakkad, Pathanamthitta, Quilon, Thiruvananthapuram, Thrissur, Wayanad	
16	Madhya Pradesh	Balaghat, Bhind, Chhatarpur, Gwalior, Indore, Jhabua, Kargone, Morena, Neemuch, Ratlam, Rewa, Satna, Sehore, Sheopur, Shivpuri, Ujjain	Alirajpur, Balaghat, Barwani, Betul, Bhind, Bhopal, Chhatarpur, Chhindwara, Datia, Dewas, Dhar, Dindori, Guna, Gwalior, Harda, Jabalpur, Jhabua, Kargon, Mandla, Mandsaur, Morena, Narsinhpur, Neemuch, Panna, Raisen, Rajgarh, Ratlam, Sagar, Satna, Sehore, Seoni, Shahdol, Shajapur, Sheopur, Sidhi, Shivpuri, Singrauli, Ujjain, Vidisha	Alirajpur, Anuppur, Ashok Nagar, Balaghat, Barwani, Betul, Bhind, Bhopal, Burhanpur, Chhatarpur, Chhindwara, Damoh, Datia, Dewas, Dhar, Dindori, Guna, Gwalior, Harda, Hoshangabad, Indore, Jabalpur, Jhabua, Khandwa, Kargon, Katni, Mandla, Mandsaur, Morena, Narsinhpur, Neemuch, Panna, Raisen, Rajgarh, Ratlam, Rewa, Sagar, Satna, Sehore, Seoni, Shahdol, Shajapur, Sheopur, Shivpuri, Sidhi, Singrauli, Tikamgarh, Ujjain, Umaria, Vidisha	Betul, Burhanpur, Chhindwara, Dhar, Khandwa, Mandsaur, Neemuch, Umaria	Balaghat, Barwani, Betul, Bhind, Bhopal, Chhatarpur, Chhindwara, Damoh, Datia, Dewas, Dhar, Dindori, Guna, Gwalior, Hoshangabad, Indore, Jabalpur, Jhabua, Khandwa, Katni, Mandla, Mandsaur, Narsinhpur, Neemuch, Panna, Raisen, Rajgarh, Ratlam, Rewa, Sagar, Satna, Sehore, Seoni, Shahdol, Shajapur, Shivpuri, Sidhi, Tikamgarh, Ujjain, Umaria, Vidisha, East Nimar	<b>Lead:</b> Balaghat, Barwani, Damoh, Datia, Dewas, Dhar, Dindori, Guna, Gwalior, Raisen, Rajgarh, Satna, Sehore, Shajapur, Shivpuri, Vidisha
17	Maharashtra	Ahmednagar, Akola, Amravati, Aurangabad, Beed, Bhandara, Buldhana, Chandrapur, Dhule, Jalgaon, Jalna, Nagpur, Nasik, Pune, Raigard, Sangli, Satara, Solapur, Thane, Yavatmal	Ahmednagar, Beed, Chandrapur, Bhandara, Dhule, Gadchiroli, Gondia, Jalna, Nagpur, Nanded, Ratnagiri, Sangli, Satara, Sindhudurg, Solapur, Wardha, Yavatmal	Ahmednagar, Akola, Amravati, Aurangabad, Beed, Bhandara, Buldana, Chandrapur, Dhule, Gadchiroli, Gondia, Hingoli, Jalgaon, Jalna, Kolhapur, Latur, Mumbai, Nagpur, Nanded, Nandurbar, Nasik, Osmanabad, Parbhani, Pune, Sangli, Satara, Solapur, Wardha, Washim, Yavatmal		Ahmednagar, Amravati, Beed, Buldana, Chandrapur, Dhule, Gadchiroli, Jalna, Kolhapur, Latur, Nandurbar, Nashik, Osmanabad, Parbhani, Ratnagiri, Satara, Thane, Wardha, Washim, Yavatmal	<b>Lead:</b> Ahmed Nagar, Akola, Aurangabad, Beed, Buldana, Dhule, Gadchiroli, Jalna, Kolhapur, Latur, Nagpur, Nanded, Osmanabad, Parbhani, Pune, Sangli, Wardha, Washim, Yavatmal

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18	Manipur				Bishnupur, Thoubal	Bishnupur, Thoubal	
19	Meghalaya					East Garo Hills, East Khasi Hills, Jaintia Hills	
20	Nagaland					Dimapur	
21	Odisha	Balasore, Bhadrak, Ganjam, Jagatsingpur, Jajpur, Kendrapara, Puri	Angul, Balasore, Bhadrak, Bargarh Bolangir, Boudh, Cuttack, Deogarh Dhenkanal, Jajpur, Kandhamal ,Keonjhar, Khurda, Mayurbhanj, Nayagarh, Nawapara, Ganjam, Jagatsinghpur, Kalahandi, Koraput, Pur Rayagada, Sambalpur, Sonepur, Sundargarh	Angul, Balasore, Bargarh Bhadrak, Bolangir, Baudh Cuttack, Deogarh, Dhenkanal, Gajapati, Ganjam, J. Singhpur, Jajpur, Jharsuguda, Kalahandi, Kendrapara, Keonjhar, Khurda, Koraput, Malkangiri, Mayurbhanj, Nawapada, Nayagarh, Phulbani, Puri Sambalpur, Sundergarh, Sonpur	Gajapati	Balasore, Bargarh, Bhadrak, Cuttack, Deogarh, J. Singhpur, Jajpur, Jharsuguda, Kalahandi, Kandmahal, Keonjhar, Kendrapara, Khurda, Koraput, Mayurbhanj, Nayagarh, Puri, Rayagada, Sambalpur, Sundergarh, Sonpur	<b>Chromium (Hexavalent)</b> - Sukinda valley in Sukinda block of Jajpur District
22	Punjab	Bhatinda, Faridkot, Ferozpur, Gurudaspur, Mansa, Moga, Muktsar Patiala, Sangrur	Amritsar, Barnala, Bhatinda, Fazilka, Faridkot, Fatehgarh Sahib, Firozpur, Gurdaspur, Jalandhar, Ludhiana, Mansa, Moga Muktsar, Pathankot, Patiala, Ropar, Sangrur, SAS Nagar (Mohali), Tarn-Taran	Amritsar, Barnala, Bhatinda, Faridkot, Fatehgarh Sahib, Firozpur, Gurdaspur, Hoshiarpur, Jalandhar, Kapurthala, Ludhiana, Mansa, Moga, Muktsar, NawanShahr, Patiala, Ropar, Rupnagar, Sangrur, Tarn-Taran	Mansa, Amritsar, Gurdaspur, Hoshiarpur, Kapurthala, Ropar, Faridkot, Nawashahar, Sangrur, Taran Taran	Bhathinda, Faridkot, Fatehgarh Sahib, Firozpur, Gurdaspur, Hoshiarpur, Mansa, Rupnagar, Sangrur	<b>Lead:</b> Amritsar, Bathinda Ferozepur, Gurdaspur, Muktsar, Ropar <b>Cadmium:</b> Fatehgarh Sahib, Ludhiana, Nawansahar, Patiala, Ropar, Sangrur, Sasnagar, Tarantaran <b>Chromium:</b> Amritsar, Bathinda, Gurdaspur, Kapurthala, Mansa, Ropar, Barnala, Sangrur Sasnagar, Tarantaran
23	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-Madhopur	Ajmer, Alwar, Banswara Barmer, Bharatpur, Baran, Bhilwara, Bikaner, Bundi, Chittaurgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar Hanumangarh, Jaipur, Jaisalmer, Jalore,	Ajmer, Alwar, Banswara, Baran, Barmer, Bundi, Bharatpur, Bhilwara, Bikaner, Chittaurgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar,	Ganganagar	Ajmer, Alwar, Banswara, Baran, Barmer, Bharatpur, Bhilwara, Bikaner, Bundi, Chittaurgarh, Churu, Dausa, Dhaulpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore,	<b>Lead:</b> Jhunjhunu Dist (Khetri Copper Deposit), Pali, Jaipur (Sambhar Lake, Sanganer)

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		Sikar, Sirohi, Tonk, Udaipur	Jhalawar Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Pratapgarh, Rajsamand Sirohi, Sikar, Sawai Madhopur, Tonk, Udaipur	Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Partapgarh, Rajasamand, Sirohi, Sikar, SwaiMadhopur, Tonk, Udaipur		Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Pratapgarh, Rajsamand, Sikar, SawaiMadhopur, Sirohi, Tonk, Udaipur	
24	Tamil Nadu	Chennai, Coimbatore, Cuddalore, Dharmapuri, Dindigul, Kancheepuram, Karur, Nagapattinam, Namakkal, Perambalur, Pudukkottai, Ramnathapuram, Salem, Sivaganga, Thanjavur, Theni, Thiruvallur, Tirunelveli, Trichchirappalli, Tuticorin, Vellore, Villupuram, Virudhunagar,	Coimbatore, Dharmapuri, Dindigul, Erode, Karur, Kancheepuram, Krishnagiri, Namakkal, Madurai, Pudukkotai, Ramanathanpuram, Salem, Sivagangai, Theni, Thiruvannamalai, Tiruchirapally, Thirunelveli, Tirupur Vellore,	Chennai, Coimbatore, Cuddalore, Dharmapuri, Dindigul, Erode, Kancheepuram, Kanyakumari, Karur, Madurai, Namakkal, Nilgiris, Perambalur, Pudukkotai, Ramanathanpuram, Salem, Sivagangai, Theni, Thiruvannamalai, Thanjavur, Tirunelveli, Thiruvallur, Trichy, Tuticorin, Vellore, Villupuram, Virudhunagar	Ariyalur Cuddalore, Nagapattinam, Ramnathapuram, Tiruvallur, Tirunelveli, Thiruvarur, Trichchirappalli, Tuticorin	Namakkal, Salem	<b>Lead</b> : Dindigul, Tiruvallur, Kancheepuram <b>Cadmium</b> : Tiruvallur <b>Chromium</b> : Cuddalore, Dindigul, Erode, Kanchipuram, Tiruvallur
25	Tripura					Dhalai, North Tripura, South Tripura, West Tripura,	
26	Uttar Pradesh	Agra, Aligarh, Firozabad, Hamirpur, Kashganj, Kanpur Nagar, Mathura, Rae Bareli, Unnao	Agra, Aligarh, Allahabad, Auraiya, Banda, Bulandshahar, Etah, Etawah,, Farrukhabad, Fatehpur, Firozabad, G B Nagar, Ghaziabad, Hathras, Jaunpur, Kannauj, Kanpur Nagar Kasganj (Kashiram	Agra, Aligarh, Allahabad, Ambedkar Nagar, Auraiya, Azamgarh, Badaun, Baghpat, Balrampur, Banda, Barabanki, Bareilly, Basti Bijnor, Bulandsahr, Chitrakoot, Etah, Fatehpur, Firozabad, GB Nagar, Ghaziabad,	<i>Bahraich, Balia, Balrampur, Bareilly, Basti, Bijnor, Chandauli, Ghazipur, Gonda, Gorakhpur, LakhimpurKheri, Meerut, Mirzapur, Muradabad, Rai Bareilly, SantKabir Nagar, Shahjahanpur,</i>	Azamgarh, Ballia, Balrampur, Etawah, Fatehpur, Gazipur, Gonda, Hardoi, KanpurDehat, Kanpur Nagar, Lakhimpur, Lalitpur, Mau, Siddartnagar, Unnao	<b>Lead</b> : Muzzafar Nagar, Mathura, Moradabad, Allahabad, Bhadohi, Ghaziabad, Jaunpur, Kanpur, Raebareli, Sonbhadra <b>Cadmium</b> : Varanasi city, Unnao <b>Chromium</b> : Kashi Vidyapeeth, Varanasi,

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			Nagar), Lalitpur, Mahoba, Mainpuri, Mathura, Maunath Bhanjan, Pratapgarh, Rai Bareli, Shajahanpur, Sonbhadra, Sultanpur, Varanasi and Unnao	Ghazipur, Hamirpur, Hardoi, Hathras, Jaunpur, Jhansi, Kannauj, Kanpur Dehat, Lakhimpur, Mahoba, Mathura, Meerut, Mau, Moradabad, Muzaffarnagar, Mirzapur, Raebarelli, SantRavidas Nagar, Shajahanpur, Sitapur, Sonbhadra, Sultanpur, Shravasti, Siddarth Nagar, Unnao	<i>Siddarthnagar, SantRavidasNagar, Unnao, Azamgarh, Bahraich, Badaun, Deoria, Jhansi, Kausambi, Kushinagar, Pilibhit, Maunath Bhanjan,</i>		Kanpur, Unnao
27	Uttarakhand			Dehradun, Haridwar, Udhamasinghnagar			
28	West Bengal	Howrah, N 24 Parganas, PurbaMedinipore, S 24 Parganas	Bankura, Birbhum, Dakshindinajpur, Malda, Purulia, Uttardinajpur, South 24 Praganas	Bankura, Bardhaman	<i>Bardhaman, Hooghly, Howrah, Malda, Murshidabad, Nadia, N-24 Parganas, S- 24 Parganas, Kochbihar</i>	Bankura, Bardhaman, Birbhum, Dakshindinajpur, E. Midnapur, Howrah, Hugli, Jalpaiguri, Kolkatta Murshidabad, N-24 Parganas, Nadia, S-24 Parganas, Uttardinajpur, West Midnapur	<b>Lead:</b> Malda, Murshidabad, Nadia, N-2 Pargana, S-24 Praganas, Kolkata <b>Cadmium:</b> N-24 Parganas, Nadia, S-24 Praganas, S-24 Prganas <b>Chromium:</b> N-24 Praganas, Murshidabad
29	Andaman & Nicobar					Andaman	
30	Daman & Diu				Diu		
	Total	212 districts in 15 states	335 districts in 20 states	387 districts in 21 states	153 districts in 21 states & UTs	302 districts in 25 states and 1 UT	Pb in 92 districts in 14 states Cd in 24 districts in 9 states Cr in 29 districts in 10 states