

GOVERNMENT OF INDIA  
MINISTRY OF WATER RESOURCES,  
RIVER DEVELOPMENT & GANGA REJUVENATION  
**LOK SABHA**  
**UNSTARRED QUESTION NO. 3281**  
ANSWERED ON 15.03.2018

**GROUND WATER CONTAMINATION**

3281. SHRI B.V. NAIK  
SHRI S.P. MUDDAHANUME GOWDA

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

- (a) the limits prescribed by World Health Organisation (WHO) for presence of chemicals like Aluminium, Arsenic, Lead, Uranium, Mercury and Chromium in ground water, chemical-wise;
- (b) whether any of the districts in Karnataka have higher concentration of the aforementioned chemicals in ground water and if so, the details thereof and the reasons therefor;
- (c) whether any study has been undertaken/completed to gauge the potential health impact due to the presence of these chemicals in ground water and if so, the details and the findings thereof; and
- (d) the steps taken/being taken to reduce/remove such chemicals in ground water in Karnataka?

**ANSWER**

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

(SHRI ARJUN RAM MEGHWAL)

(a) World Health Organization (WHO) does not prescribe any limits for chemicals in ground water. However, as per WHO Guidelines for Drinking-water Quality (GDWQ), the following are recommended safe limit on naturally occurring constituents:

S.No	Contaminant in Drinking water	WHO limits in (µg/l)
1	Arsenic	10 µg/l
2	Chromium	50 µg/l
3	Uranium	30 µg/l
4	Mercury	6 µg/l
5	Lead	10 µg/l

(b) As per Integrated Management Information System (IMIS) of Ministry of Drinking Water and Sanitation (MoDWS) as on 01.04.2017, the only Arsenic affected habitations in Karnataka are in districts of Mysore (2 habitations) and Raichur (2). Details are placed at **Annexure**.

(c) As per a review Article published in Indian Journal of Medical Research, October-2008, adverse effect of high Arsenic in water include pigmentation and keratosis of skin. Besides, there can be various systemic manifestations over and above skin lesions, such as chronic lung diseases like chronic bronchitis, chronic obstructive pulmonary disease and bronchiectasis, liver disease like non-cirrhotic portal fibrosis and other disease like polyneuropathy, peripheral vascular disease, hypertension and ischeamic heart disease, diabetes mellitus, non-pitting oedema of feet/hands, weakness and anaemia. Cancer of skin lung, and urinary bladder are important cancers associated with chronic arsenic toxicity.

(d) Rural drinking water supply is a State subject. For improving the coverage of safe drinking water to rural population, the Ministry of Drinking Water & 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. The funds provided to the States under NRDWP can be utilized for coverage and tackling water quality problems.

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**No of Quality Affected Habitations As On 01/04/2017 in Karnataka**  
( IMIS of Ministry of Drinking Water and Sanitation (MDWS)

**Financial Year:-AsOn (01/04/17) State:-KARNATAKA District:-All District**

S.No.	District	Contamination Wise Number Of Habitations						
		Total	Fluoride	Arsenic	Iron	Salinity	Nitrate	Heavy Metal
		Habs	Habs	Habs	Habs	Habs	Habs	Habs
1	Bagalkot	13	5	0	0	1	7	0
2	Bangalore Rural	12	2	0	1	1	8	0
3	Bangalore Urban	10	2	0	0	0	8	0
4	Belgaum	8	1	0	1	1	5	0
5	Bellary	19	17	0	0	1	1	0
6	Bidar	1	0	0	0	0	1	0
7	Bijapur	151	90	0	14	7	40	0
8	Chamarajanagar	0	0	0	0	0	0	0
9	Chik Ballapur	322	311	0	1	0	10	0
10	Chikmagalur	4	1	0	3	0	0	0
11	Chitradurga	165	69	0	11	7	77	1
12	Dakshin Kannad	31	0	0	21	0	10	0
13	Davangere	42	19	0	2	2	19	0
14	Dharwad	0	0	0	0	0	0	0
15	Gadag	37	29	0	0	1	7	0
16	Gulbarga	15	5	0	0	0	10	0
17	Hassan	9	2	0	3	3	1	0
18	Haveri	0	0	0	0	0	0	0
19	Kodagu	0	0	0	0	0	0	0
20	Kolar	123	81	0	0	1	41	0
21	Koppal	10	9	0	0	0	1	0
22	Mandya	190	48	0	21	6	115	0
23	Mysore	4	1	2	1	0	0	0
24	Raichur	45	36	2	0	4	3	0
25	Ramanagaram	19	13	0	0	0	6	0
26	Shimoga	9	0	0	9	0	0	0
27	Tumkur	20	1	0	1	10	8	0
28	Udupi	3	0	0	3	0	0	0
29	Uttar Kannada	0	0	0	0	0	0	0
30	Yadgir	3	3	0	0	0	0	0
	<b>Total</b>	<b>1265</b>	<b>745</b>	<b>4</b>	<b>92</b>	<b>45</b>	<b>378</b>	<b>1</b>

1.Habitations with any contamination including Arsenic are counted under 'Arsenic' Column.

2.Habitations with any contamination including Fluoride and without Arsenic are counted under 'Fluoride' Column.

3.Habitations with any contamination including Iron and without Arsenic and Fluoride are counted under 'Iron' Column.

4.Habitations with any contamination including Salinity and without Arsenic,Fluoride and Iron are counted under 'Salinity' Column.

5.Habitations with any contamination including Nitrate and without Arsenic, Fluoride, Iron and Salinity are counted under 'Nitrate' Column.

6.Habitations with any contamination including Heavy Metal and without Arsenic, Fluoride, Iron, Salinity and Nitrate are counted under 'Heavy Metal' Column.