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संयुक्त सचिव
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D.O. WQ-11021/7/2016-WQ

Dated: 02nd September, 2016

Dear Madam / Sir,

This is regarding effort of the Ministry proposed to be undertaken for mitigating contamination of Arsenic / Fluoride in Rural Drinking Water Supply in a sustainable manner to avoid hardships being faced by the rural population. For the same, the Ministry is planning to have a **National Sub-Mission within the National Rural Drinking Water Programme (NRDWP)** through which new piped water supply schemes from safe perennial sources may be taken up by the States. **Draft Guidelines** of the Sub-Mission is enclosed for perusal (**Anex.I**).

2. The Sub-Mission which is to be completed in a time bound manner by **March, 2020**, will be funded on **50:50 Centre:State** sharing basis excepting North-East and Himalayan States where the sharing pattern will be **90:10**. While selecting the habitations for sanctioning the schemes, the State is to ensure cluster of habitations which have only or mostly Arsenic / Fluoride affected habitations and enroute non-Arsenic / Fluoride affected habitations are to be avoided and may be allowed in case of only exceptional unavoidable situations. However, the funding from the Ministry will **only be proportional to population of Arsenic / Fluoride affected habitations and not for enroute habitations**. Further, funds will be released in installments to the States on milestones of physical completion of each scheme.

3. Based on the data available in the Integrated Management Information System (IMIS) as on 18.08.2016, data sheet has been prepared (**enclosed as Anex.II**) for the respective State involving Arsenic / Fluoride affected habitations. The State is hereby requested to furnish further details by filling

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: 2 :

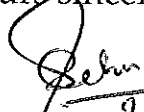
of the last columns of the data sheet **by 16.09.2016** through entry under IMIS. The States are hereby also requested to forward the **commitment of ensuring State matching share** corresponding to release of Central Share for Arsenic / Fluoride affected habitations under this Sub-Mission and **entire share corresponding to enroute habitations.**

4. It is also pertinent to mention here that for every successful scheme, there must be a robust mechanism for monitoring during execution which will help the Implementing Agency. For this, provision of **geo-tagging and third party monitoring** are also being contemplated.

5. With this, I hereby request the State Government to do the needful as requested above so as to enable the Ministry to move the proposal of the above said National Sub- Mission Plan.

With Regards,

Yours sincerely,


(Satyabrata Sahu) 2/9/16

To

Principal Secretary / Secretary of Rural Water Supply Department of States of Rajasthan, Bihar, Karnataka, West Bengal, Telangana, Jharkhand, Andhra Pradesh, Punjab, Uttar Pradesh, Haryana, Assam, Madhya Pradesh, Chhattisgarh, Kerala, Odisha, Maharashtra and Gujarat.

Guidelines to provide safe drinking water in remaining Arsenic and Fluoride affected habitations in rural India on mission mode

A. Preamble:

About 76 percent of rural habitations in India have achieved a fully covered (FC) status, under the National Rural Drinking Water Program, with 40 liters per capita daily (lpcd), but this coverage is primarily through hand-pumps and does not necessarily translate into sustainable and good quality service delivery. More than 71,000 habitations are suffering from problems of water quality and only 52 percent of the 170 million plus rural households have access to tap water. The major physio-chemical pollutants include Arsenic, Fluoride, Iron, Salinity and Nitrate, with critical being Arsenic and Fluoride since they pose immediate health hazard compared to the others. A state-wise list of habitations affected by Arsenic and Fluoride is given below:

Table 1: States affected by Fluoride and Arsenic contamination as per IMIS of Ministry as on 11th August 2016

State	Total Water Quality affected Habitations	Arsenic (>0.05mg/l)	Fluoride (>1.5mg/l)
Rajasthan	20895	0	6855
West Bengal	10004	962	1053
Assam	8840	284	155
Jharkhand	6834	119	998
Bihar	5574	102	1087
Punjab	3770	206	285
Odisha	2799	0	70
Karnataka	2117	4	1054
Telangana	1484	0	1041
Chhattisgarh	1148	0	75
Kerala	656	0	73
Andhra Pradesh	571	0	491
Maharashtra	394	0	100
Uttar Pradesh	361	57	200
Haryana	209	0	200

Madhya Pradesh	193	0	148
Gujarat	17	0	11

*Note: Recently BIS has reduced the permissible limit of arsenic in drinking water from 0.05 mg/litre to 0.01 mg/litre through an Amendment Issued in June 2015. Hence around 10,000 rural habitations are expected with arsenic level more than 0.01mg/l.

Arsenic is a carcinogenic element and is associated with skin, lung, bladder, kidney, and liver cancer. Dermatological, developmental, neurological, respiratory, cardiovascular, immunological, and endocrine effects are also evident.

Fluorosis, a public health problem, is caused by excess intake of fluorides through drinking water/food products/industrial pollutants, over a prolonged period. It causes severe health related disorders such as dental fluorosis, skeletal fluorosis and non-skeletal fluorosis besides inducing ageing.

These harmful effects, being permanent and irreversible in nature, are detrimental to the health of an individual and the community, which in turn have an impact on growth, development, economy and human resource development of the country.

To address the issue of last mile coverage and eliminate problems of Arsenic and Fluoride in all the habitations, Ministry of Drinking Water and Sanitation proposes a program focused on Arsenic and Fluoride. This programme aims to take India one step closer toward international standards of Water Quality by the year 2020.

B. Defining standard drinking water quality:

Bureau of Indian Standards has set specifications in its IS-10500-2012 standards for drinking water. However, this standard is only voluntary in nature and not legally supported for enforcement. This standard has two limits:

- Desirable limits
- Maximum permissible or cause for rejection limits

If any parameter exceeds the cause for rejection limit, that water is considered as contaminated. Broadly speaking, water is defined as contaminated if it is biologically contaminated (presence of microscopic organisms such as algae, zoo-plankton, flagellates, E-coli etc) or chemical contamination exceeds permissible limits (e.g. excess fluoride [$>1.5\text{mg/l}$], salinity i.e., Total Dissolved Solids (TDS) [$>2,000\text{mg/l}$], dissolved iron [$>0.3\text{mg/l}$], arsenic [$>0.01\text{mg/l}$], nitrates [$>45\text{mg/l}$] etc.).

In rural areas, more than 85% of drinking water sources are ground water based and in the short-term, chemical constituents in groundwater do not change much, therefore testing once in a year for chemical contaminants is adequate. Testing for bacteriological contamination is recommended 4 times a year, once in every season. However, every year it should be carried out at least twice i.e. during pre-monsoon and post-monsoon seasons.

C. Existing funding under NRDWP to tackle drinking water quality problems:

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. Further, 5% of NRDWP funds are also earmarked and allocated to Japanese Encephalitis/Acute Encephalitis Syndrome (JE/AEs) affected high priority districts. In addition to this, Government of India provides 3% NRDWP funds on 100% Central assistance basis to States for water quality monitoring and surveillance, which inter alia include taking up works relating to setting up of new up-gradation of districts/sub district water quality testing laboratories, providing chemicals and consumables to laboratories, providing field test kits/refills to Gram Panchayats etc. Further, up to 10% of NRDWP funds allocated to States could be utilized for sustainability of drinking water sources through artificial recharge of ground water and other methods, which inter alia may also dilute the level of contamination in aquifers.

D. Steps taken so far / short term measures for tackling drinking water contamination:

1. The Ministry has prepared a Strategy Plan to provide safe drinking water to 90% of the rural population of the country preferably through surface water based piped water supply schemes by the year 2022 as a long-term sustainable solution, subject to availability of funds.
2. The Ministry has encouraged all the States to commission surface water based piped water supply schemes in all water quality affected habitations as a long term sustainable solution.
3. All States have been advised to install community water purification plants, in reported arsenic and fluoride affected habitations by March 2017, as this is quicker compared to installation of piped water supply schemes.
4. This is being done as a short term immediate measure for providing 8-10 lpcd (litre per capita per day) of safe water for drinking and cooking purpose only.
5. Since the allocation of the Ministry was reduced during 2015-16, NITI Ayog has released Rs 1000 crore as a one-time Central assistance for this purpose which also includes funds for last mile connectivity of piped water supply schemes in Rajasthan and West Bengal which are most affected by fluoride and arsenic contaminations in drinking water respectively.

E. Why a National Sub-Mission?

The proposed program warrants a National Sub-Mission to be completed on mission mode before March 2020 due to:

1. Criticality and urgency of the matter
2. Requirement of significant increase in operational efficiency
3. Requirement of additional funds, robust monitoring and surveillance of those
4. Requirement of special technology, manpower and strategy to achieve the goal

F. Goal:

To cover of all the arsenic & fluoride affected habitations with safe & perennial surface water based piped water supply schemes as the permanent & sustainable solution.

(a) The sub-mission will have three phases namely:

1. Diagnostic phase: To correctly determine the action plan based on most recent data
2. Implementation phase: Roll-out of area specific schemes as per guidelines
3. Sustain phase: To ensure that schemes are running successfully with adequate monitoring and surveillance

G. Steps to roll out the project:

1. A detailed baseline survey, will be conducted by Ministry of Drinking Water and Sanitation with the help of States, to define performance metrics and as-is situation. The analysis will be used for prioritization and implementation plan.
2. **Identification of habitations:** State has to identify the habitations, affected by water contaminated by Arsenic and Fluoride. States have to report regularly on Integrated Management Information System (IMIS) of the Ministry of Drinking Water and Sanitation.
Priorities may be as below:-
 - (a) Habitations not covered by any other existing long term programme of central or state government.
 - (b) Habitations having higher degree of contamination according to IMIS data.
3. **Identification of Source:** State has to identify and select the source may be surface source / contaminants free aquifer, but which should be perennial, permanent, safe and sustainable and preferably nearer to the identified habitation.
4. **Quality testing of source:** States have to follow the Uniform Drinking Water Quality Monitoring Protocol published and widely distributed by the Ministry of Drinking Water and Sanitation.
5. **Preparation of Schemes:** On the basis of identification of habitation and source, State has to prepare a proposal.

➤ **Mandatory Requirements :**

1. Per capita cost of supply of safe and adequate drinking water to the end user.
 2. Operation and Maintenance cost.
 3. Provision of en-route villages, towns and cities if any, in co-ordination with the respective local government bodies / institutions, but priority to be given on Arsenic / Fluoride affected habitations.
 4. Detailed phase wise and time bound plan.
 5. The State should firmly commit in providing, State matching share corresponding to release of Central Share for Arsenic and Fluoride affected habitations and entire share corresponding to en-route habitations.
 6. Ground Level Service Reservoir (GLSR) / Over Head Tanks (OHT / ESR) should not be far away from the source to minimize raising mains.
 7. Ground Level Service Reservoir (GLSR) / Over Head Tanks (OHT / ESR) should be located so as to give adequate distribution by gravity to cover maximum number of habitations.
 8. The schemes should have recycling / reuse of filter bed washed water in Water Treatment Plants (WTP).
 9. All mega schemes with Capital Expenditure more than 20 Crore shall necessarily have Supervisory Control and Data Acquisition (SCADA) system to minimize water losses and non-revenue water losses.
 10. The schemes should have sufficient capacity of chlorination plants including online booster chlorination plants, so that end user should get purified / safe water.
 11. All the mega water supply schemes shall have dedicated Three Phase electrical power supply.
 12. All Water Treatment Plants (WTP's) shall necessarily have a water quality testing laboratory with adequate manpower.
 13. It is up to the State Government to decide the service level of water supply delivery, however in no case this shall be less than 40 liter per capita per day (LPCD) based on current population.
 14. All mega schemes, shall be commissioned within a span of 24 months from the date of award of work.
 15. The schemes should have the provision for bulk water meter before the entry point of Gram Panchayat / Habitation.
- **Advisory :**
16. It is advised to use renewable energy like Solar power / solar panels /solar light wherever necessary and required to minimize the O&M cost and to the save electricity.
 17. It is advised to have sufficient number of flow meters in the scheme.

18. It is advisable that, the schemes should be designed so that, it makes minimum energy consumption.
19. It is advised to have necessary provision for extension, in future.
20. It is advised to have a suitable water tariff plan, if not existing already.

H. Apex Committee:

States have to submit the Detailed Project Report (DPRs) approved by State Level Scheme Sanction Committee (SLSSC) to the Ministry to accord the approval from Apex Committee.

Details of Apex Committee member are as below:

Sl.No.	Committee	
1.	Secretary, Ministry of Drinking Water and Sanitation.	Chairperson
2.	Financial Adviser, Ministry of Drinking Water and Sanitation.	Member
3.	Joint Secretary (Water), Ministry of Drinking Water and Sanitation.	Member
4.	Representative from NITI Aayog.	Member
5.	Representative from Department of Expenditure.	Member
6.	Representative from Ministry of Statistical and Programme Implementation.	Member
7.	Representative from Ministry of Health and Family Welfare.	Member
8.	Director (Water), Ministry of Drinking Water and Sanitation.	Member
9.	Deputy Adviser (WQ), Ministry of Drinking Water and Sanitation.	Convenor

I. Monitoring and Surveillance:

1. States have to report regularly on Integrated Management Information System (IMIS) of the Ministry about physical and financial progress.
2. States have to report the Global Positioning System (GPS) co-ordinates of source point and delivery point in IMIS of the Ministry.
3. States have to upload the photographs regularly on mRWS mobile app.

4. This Programme will be monitored by District Development Coordination and Monitoring Committee (DISHA) at district level recently constituted by Ministry of Rural Development under Chairmanship of Member of Parliament (M.P.).
5. All the schemes will have milestone linked funding.
6. All the schemes will have Geo-Tagging facility.
7. All the schemes are monitored either by Bhuvan based satellite or by Drone based satellite.

J. Modus operandi of implementation:

➤ Process flow:

1. A dedicated technology application will be developed for the sub-mission which will serve as a repository of all sub-mission related data.
2. All scheme related processes will be routed through this portal to ensure real-time monitoring and increased efficiency
3. A standard and user friendly Project Information Format (PIF) will be designed by Ministry of Drinking Water and Sanitation which will be common to all the states. The PIF will be used to initiate all new schemes and serve as a feeder for the DPR.
4. The portal will have the functionality of integrating existing schemes into the sub-mission
5. As per the guidelines and approval framework of the sub-mission, all scheme related information will be uploaded on the portal for review and approval. All approvals, rejections, sanctions will be online with a pre-decided turnaround time for stakeholders. At any point of time, stakeholders can access real-time status of the PIF
6. The DPRs, will be required Post-Facto and only for those scheme PIFs which have received all necessary approvals
7. The scheme implementation and ground-work can start in parallel to ensure speed and efficiency

➤ Project planning:

8. It is the Engineer in Chief / Chief Engineer of the State Government who will be responsible for preparing the most techno-economically feasible and cost effective Detailed Project Report (DPR).
9. While preparing the DPR's the Engineer in Chief / Chief Engineer shall ensure the ground level engineers with the help of district administration and Zilla Panchayat to take in principal approval of all Gram Panchayat (G.P.) for acceptance of the scheme and taking over the assets within their jurisdiction.
10. The approved proposal in Annual Action plan shall then be made into detailed project reports (DPR's) for final approval in State Level Scheme Sanction Committee (SLSSC).
11. After preparation of DPR's they should be vetted technical by the State technical agency before the same is placed at State Level Scheme Sanction Committee (SLSSC).
12. The area officer of the Ministry of Drinking Water and Sanitation shall be responsible for technical examination of DPR's and appraise the State Level Scheme Sanction Committee (SLSSC) for taking a decision.
13. States have to submit the Detailed Project Report (DPRs) approved by State Level Scheme Sanction Committee (SLSSC) to the Ministry to accord the approval from Apex Committee.
14. Since overall implementation is on mission mode a dedicated Project Director (not below the rank of Superintendent Engineer) shall be engaged by all the State Governments for design and implementation of the project.

K. Technical and Administrative Sanctions:

After approval of the proposal in Apex Committee. Technical sanction to be accorded by the competent authority. Depending up on technical sanction, administrative sanction to be accorded by the competent authority.

L. Funding Pattern:

Funds sharing between Center and State for North-Eastern /Himalayan States shall be 90:10 and for all other States 50:50.

M. Proposed Release of Grants:

On the basis of administrative sanctions, grants should be released to the executing agency by the Ministry of Drinking Water & Sanitation, in phased manner based on the performance and submission of requisite physical and financial document to the Ministry.

N. Recurring Expenditure:

1. It is advisable that the State shall dovetail 14th finance commission funds for under taking O&M within their jurisdiction.
2. It is the overall responsibility of the concerned State Government to bear the Recurring expenditure, if necessary over and above the 15% NRDWP-O&M funds allocated to them.
3. It is the responsibility of Gram Panchayat to own-up and take-up operation and maintenance (O&M) within their jurisdiction, while O&M responsibility of all head works including Water Treatment Plants (WTP's) shall be with the State Department / Board dealing with rural water supply.

O. Information, Education and Communication (IEC) activities:

1. Extensive awareness campaign on Arsenic and Fluoride should be organized at Gram Panchayat level.
2. To explain the technology / training / methodology and procedure to the Scheme implementing Engineers, periodic Workshop should be organized at various reputed institutions.

The program strives to ensure sustainability of water availability in terms of potability, adequacy, convenience, affordability and equity, on a sustainable basis, while also adopting decentralised approach involving States and community organizations.

**Ministry of Drinking Water & Sanitation
National Rural Drinking Water Programme**

Format F18 - Estimated Cost of covering Arsenic and Fluoride Habitations (As on 18/08/2016)

State:-All State

S.No.	State	Contamination	Habitations Affected	As per lab testing Additional Habitations affected as (>01 & <.05)	Total Affected Habitations	No Of Habitations Where Ongoing Schemes	Net Habitations	Present Affected population in such habitations	Design population = 1.3*Present population	Average per capita cost of schemes to be covered with such habitations *	Cost of schemes coverage (in Lakhs)	Minimum Habitations Required to be covered with such schemes	Additional cost for coverage of Enroute Habitations	Total cost (In Lakhs)
1	ANDAMAN and NICOBAR	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
2	ANDAMAN and NICOBAR	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
3	ANDAMAN and NICOBAR Total		0	0	0	0	0	0	0		0.00	0	0	0.00
4	ANDHRA PRADESH	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
5	ANDHRA PRADESH	Flouride	421	0	421	2	419	292899	380769	8565	32612.86	0	0	32612.86
6	ANDHRA PRADESH Total		421	0	421	2	419	292899	380769		32612.86	0	0	32612.86
7	ARUNACHAL PRADESH	Arsenic	0	343	343	9	334	22479	29223	7000	2045.61	0	0	2045.61
8	ARUNACHAL PRADESH	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
9	ARUNACHAL PRADESH Total		0	343	343	9	334	22479	29223		2045.61	0	0	2045.61
10	ASSAM	Arsenic	284	3442	3726	511	3215	1236964	1608053	7000	112563.71	0	0	112563.71
11	ASSAM	Flouride	155	0	155	103	52	19729	25648	8565	2196.75	0	0	2196.75
12	ASSAM Total		439	3442	3881	614	3267	1256693	1633701		114760.46	0	0	114760.46
13	BIHAR	Arsenic	102	975	1077	28	1049	1666039	2165851	7000	151609.57	0	0	151609.57
14	BIHAR	Flouride	1043	0	1043	199	844	1128975	1467668	8565	125705.76	0	0	125705.76
15	BIHAR Total		1145	975	2120	227	1893	2795014	3633519		277315.33	0	0	277315.33
16	CHANDIGARH	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
17	CHANDIGARH	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
18	CHANDIGARH Total		0	0	0	0	0	0	0		0.00	0	0	0.00
19	CHATTISGARH	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
20	CHATTISGARH	Flouride	75	0	75	7	68	24484	31829	8565	2726.15	0	0	2726.15
21	CHATTISGARH Total		75	0	75	7	68	24484	31829		2726.15	0	0	2726.15

S.No.	State	Contamination	Habitations Affected	As per lab testing Additional Habitations affected as (>.01 & <.05)	Total Affected Habitations	No Of Habitations Where Ongoing Schemes	Net Habitations	Present Affected population in such habitations	Design population = 1.3*Present population	Average per capita cost of schemes to covered with such habitations *	Cost of schemes coverage (In Lakhs)	Minimum Entoure Habitations Required to be covered with such schemes	Additional cost for coverage of Entoure Habitations	Total cost (In Lakhs)
CHATTISGARH														
Total														
22	DADRA & NAGAR HAVELI	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
23	DADRA & NAGAR HAVELI	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
24	DADRA & NAGAR HAVELI		0	0	0	0	0	0	0		0.00	0	0	0.00
Total														
25	DAMAN & DIU	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
26	DAMAN & DIU	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
27	DAMAN & DIU		0	0	0	0	0	0	0		0.00	0	0	0.00
Total														
28	DELHI	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
29	DELHI	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
30	DELHI Total		0	0	0	0	0	0	0		0.00	0	0	0.00
31	GOA	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
32	GOA	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
33	GOA Total		0	0	0	0	0	0	0		0.00	0	0	0.00
34	GUJARAT	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
35	GUJARAT	Flouride	11	0	11	1	10	19077	24800	8565	2124.12	0	0	2124.12
36	GUJARAT Total		11	0	11	1	10	19077	24800		2124.12	0	0	2124.12
37	HARYANA	Arsenic	0	45	45	0	45	142944	185827	7000	13007.89	0	0	13007.89
38	HARYANA	Flouride	200	0	200	8	192	487869	634256	8565	54324.03	0	0	54324.03
39	HARYANA Total		200	45	245	8	237	630833	820033		67331.92	0	0	67331.92
40	HIMACHAL PRADESH	Arsenic	0	157	157	7	150	32752	42578	7000	2980.46	0	0	2980.46
41	HIMACHAL PRADESH	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
42	HIMACHAL PRADESH Total		0	157	157	7	150	32752	42578		2980.46	0	0	2980.46
43	JAMMU AND KASHMIR	Arsenic	0	7	7	5	2	3642	4735	7000	331.45	0	0	331.45
44	JAMMU AND KASHMIR	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00

S.No.	State	Contamination	Habitations Affected	As per lab testing Additional Habitations affected (>.01 & <.05)	Total Affected Habitations	No Of Habitations Where Ongoing Schemes	Net Habitations	Present Affected population in such habitations	Design population = 1.3*Present population	Average per capita cost of schemes to covered with such habitations *	Cost of schemes coverage (in Lakhs)	Minimum Enroute Habitations Required to be covered with such schemes	Additional cost for coverage of Enroute Habitations	Total cost (in Lakhs)
45	JAMMU AND KASHMIR Total		0	7	7	5	2	3642	4735		331.45	0	0	331.45
46	JHARKHAND	Arsenic	119	11	130	6	124	115862	150621	7000	10543.47	0	0	10543.47
47	JHARKHAND	Flouride	998	0	998	43	955	482050	626665	8565	53673.86	0	0	53673.86
48	JHARKHAND Total		1117	11	1128	49	1079	597912	777286		64217.33	0	0	64217.33
49	KARNATAKA	Arsenic	4	17	21	3	18	47141	61283	7000	4289.81	0	0	4289.81
50	KARNATAKA	Flouride	1038	0	1038	137	901	479224	622991	8565	53359.18	0	0	53359.18
51	KARNATAKA Total		1042	17	1059	140	919	526365	684274		57648.99	0	0	57648.99
52	KERALA	Arsenic	0	3	3	0	3	7651	9946	7000	696.22	0	0	696.22
53	KERALA	Flouride	73	0	73	37	36	91996	119595	8565	10243.31	0	0	10243.31
54	KERALA Total		73	3	76	37	39	99647	129541		10939.53	0	0	10939.53
55	LAKSHADWEEP	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
56	LAKSHADWEEP	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
57	LAKSHADWEEP Total		0	0	0	0	0	0	0		0.00	0	0	0.00
58	MADHYA PRADESH	Arsenic	0	418	418	19	399	233444	303477	7000	21243.39	0	0	21243.39
59	MADHYA PRADESH	Flouride	136	0	136	128	8	5519	7175	8565	614.54	0	0	614.54
60	MADHYA PRADESH Total		136	418	554	147	407	238963	310652		21857.93	0	0	21857.93
61	MAHARASHTRA	Arsenic	0	1	1	0	1	87	113	7000	7.91	0	0	7.91
62	MAHARASHTRA	Flouride	100	0	100	54	46	112297	145986	8565	12503.70	0	0	12503.70
63	MAHARASHTRA Total		100	1	101	54	47	112384	146099		12511.61	0	0	12511.61
64	MANIPUR	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
65	MANIPUR	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
66	MANIPUR Total		0	0	0	0	0	0	0		0.00	0	0	0.00
67	MEGHALAYA	Arsenic	0	1	1	0	1	169	220	7000	15.40	0	0	15.40
68	MEGHALAYA	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
69	MEGHALAYA Total		0	1	1	0	1	169	220		15.40	0	0	15.40
70	MIZORAM	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
71	MIZORAM	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00

S.No.	State	Contamination	Habitations Affected	As per lab testing Additional Habitations affected as (>.01 & <.05)	Total Affected Habitations	No Of Habitations Where Ongoing Schemes	Net Habitations	Present Affected population in such habitations	Design population = 1.3*Present population	Average per capita cost of schemes to be covered with such habitations *	Cost of schemes coverage (In Lakhs)	Minimum Enroute Habitations Required to be covered with such schemes	Additional cost for coverage of Enroute Habitations	Total cost (In Lakhs)
72	MIZORAM Total		0	0	0	0	0	0	0	0	0.00	0	0	0.00
73	NAGALAND	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
74	NAGALAND	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
75	NAGALAND		0	0	0	0	0	0	0		0.00	0	0	0.00
76	ODISHA	Arsenic	0	2	2	1	1	42	55	7000	3.85	0	0	3.85
77	ODISHA	Flouride	65	0	65	3	62	21609	28092	8565	2406.08	0	0	2406.08
78	ODISHA Total		65	2	67	4	63	21651	28147		2409.93	0	0	2409.93
79	PUDUCHERRY	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
80	PUDUCHERRY	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
81	PUDUCHERRY		0	0	0	0	0	0	0		0.00	0	0	0.00
82	PUNJAB	Arsenic	206	286	492	4	488	590103	767134	7000	53699.38	0	0	53699.38
83	PUNJAB	Flouride	285	0	285	3	282	336296	435885	8565	37333.55	0	0	37333.55
84	PUNJAB Total		491	286	777	7	770	925399	1203019		91032.93	0	0	91032.93
85	RAJASTHAN	Arsenic	1	2	3	3	0	0	0	7000	0.00	0	0	0.00
86	RAJASTHAN	Flouride	6849	0	6849	1956	4893	2985305	3880897	8565	332398.83	0	0	332398.83
87	RAJASTHAN		6850	2	6852	1959	4893	2985305	3880897		332398.83	0	0	332398.83
88	SIKKIM	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
89	SIKKIM	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
90	SIKKIM Total		0	0	0	0	0	0	0		0.00	0	0	0.00
91	TAMIL NADU	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
92	TAMIL NADU	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
93	TAMIL NADU		0	0	0	0	0	0	0		0.00	0	0	0.00
94	TELANGANA	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
95	TELANGANA	Flouride	1041	0	1041	86	955	1299331	1689130	8565	144673.98	0	0	144673.98
96	TELANGANA		1041	0	1041	86	955	1299331	1689130		144673.98	0	0	144673.98
97	TRIPURA	Arsenic	0	1	1	0	1	1118	1453	7000	101.71	0	0	101.71
98	TRIPURA	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
99	TRIPURA Total		0	1	1	0	1	1118	1453		101.71	0	0	101.71
100	UTTAR PRADESH	Arsenic	57	205	262	108	154	159572	207444	7000	14521.08	0	0	14521.08
101	UTTAR PRADESH	Flouride	200	0	200	85	115	204445	265779	8565	22763.97	0	0	22763.97

S.No.	State	Contamination	Habitations Affected	As per lab testing Additional Habitations affected (>.01 & <.05)	Total Affected Habitations	No Of Habitations Where Ongoing Schemes	Net Habitations	Present Affected population in such habitations	Design population = 1.3*Present population	Average per capita cost of schemes to covered with such habitations *	Cost of schemes coverage (In Lakhs)	Minimum Habitations Required to be covered with such schemes	Additional cost for coverage of Enroute Habitations	Total cost (In Lakhs)
102	UTTAR PRADESH		257	205	462	193	269	364017	473223		37285.05	0	0	37285.05
	Total													
103	UTTARAKHAND	Arsenic	0	0	0	0	0	0	0	7000	0.00	0	0	0.00
104	UTTARAKHAND	Flouride	0	0	0	0	0	0	0	8565	0.00	0	0	0.00
105	UTTARAKHAND		0	0	0	0	0	0	0		0.00	0	0	0.00
	Total													
106	WEST BENGAL	Arsenic	951	7115	8066	1090	6976	8950460	11635598	7000	814491.86	0	0	814491.86
107	WEST BENGAL	Flouride	1046	0	1046	193	853	517509	672762	8565	57622.07	0	0	57622.07
108	WEST BENGAL		1997	7115	9112	1283	7829	9467969	12308360		872113.93	0	0	872113.93
	Total		15460	13031	28491	4839	23652	21718103	28233538		2149435.51	0	0	2149435.51

* This is national average considered after consulting various states for schemes under execution/planning.

Source: <http://indiawater.nic.in>

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