Annex 1:

People’s Republic of Bangladesh
Local Government, Rural Development and Cooperatives Ministry
Local Government Department
Water Supply-1 Supra Branch

Memo no.- Sthasobi/Pas-1/Di: Gra: Pa: So:/PAC-PIC/Project-01/2010/269
Date: 17 November, 2011

Subject: Minutes of the first meeting of the Steering Committee of the Special Rural Water Supply Project under the Department of Public Health and Engineering.

1.1 President : Abu Alam Mohd. Shahid Khan, Secretary Local Government Department.
1.2 Date and Time : 30 October, 2011 3:30PM.
1.3 Venue : Conference Room, Local Government Department.
1.4 List of persons present at the meeting : Annex Ka

The President welcomed everyone present at the meeting and requested the Project Director to commence the meeting according to the agenda.

Discussion:

Agenda-1: Discussion about the progress of the project:

The Project was approved at a meeting at ECNEC on 06/07/2011Eng. In the financial year 2010-2011 the project was included in the Annual Development Program without being allocated. In the first year, i.e. financial year 2010-11Eng, of the approved DPP of the project, the target for expenditure was 211 crore 82 lakh and 45 thousand takas. According to this in that financial year projects were taken up to install 36139 different types of tube-well/ water sources. The estimated cost for these projects was Tk. 21182.45 lakh (two hundred eleven crore 82 lakh 45 thousand). In the financial year 2010-2011 in the corrected ADP a sum total of 8760.00 lakh (87 crore 60 lakh) (Principal 8509.00 + Tax 235.74 lakh) was received. Through that financial expenditure it was possible to install...
16611 various types of tube-wells/water sources. Meaning, until June 2011 Eng there had been a physical progress of 45.96 percent and a financial progress of 100 percent. The remaining 36139-16611 = 19528 different types of tube-wells and water sources have been carried over to the financial year 2011-2012.

The expenditure of installing the 19528 tube-wells/water sources carried over will be Tk. 11679.95 lakh (Taka one hundred 16 crore 79 lakh 95 thousand) and in the current financial year the number of physical projects deployed at the field level is the installation of 20,000 different types of tube-wells/ water sources. As a result the total amount of money needed this year will be 11679.95 lakh + 11285.84 lakh = 22965.79 lakh taka.

Decision:
The implementation work of the carried over water sources has to be completed very rapidly and in the current financial year a tender has to be called for the installation of 20,000 water sources and its implementation undertaken.

Agenda-2: Discussion on the financial allotment and expenditure under the project.

In the present fiscal year a financial allocation of 15000.00 (Taka one hundred and fifty crore) has been received under the project, in the present fiscal year the total amount of obstacle-free money in the first and second instalment is 7500.00 lakh and the and the total amount of expenditure is 7187.63.00 lakh.

Decision:
In the present fiscal year efforts have to be made to receive the third instalment of the money and steps have to be taken to allocate the extra 9000.00 (ninety crore) taka.

Agenda-3: Discussion about the financial allocation and physical work for the current 2011-12 fiscal year under the project.

- In 2011-12 fiscal year the financial allocation received under the project is 15000.00 lakh (one hundred 50 crore) taka. Out of which the total amount of tax is Taka 800.00 lakh, capital is Taka 14200.00 lakh. Upon expenditure of that
amount last year, besides implementing the carryover work, in the present fiscal year work has been taken up to install 20,000 various types of sources of water.

Decision:
Through the calling of tender steps have to be taken very quickly to implement the work at field level.

Agenda-4: Any Other Business

A) Discussions and decisions about methods for selecting locations:

After having a detailed discussion about methods for selecting locations a decision was taken that the sources of water should be installed at community level instead of individual level. In addition, importance should certainly be given to ensure that the very poor communities get access to clean water. Where there is inadequate access to clean water, the installations should be done on the basis of necessity and the WATSAN committee should make the ultimate decision regarding the location of the water supply allocated under the Annual Development Plan. However, 50 percent of the sites for allocation should be finalized after discussion with the relevant Member of Parliament of that area.

B) To publicize in the newspaper: If the necessity is felt advertising can be done in the newspapers for the selection of locations for tube-wells/water sources under this project and other issues.

Since there were no other agendas for discussion the president thanked everyone present and concluded the meeting.

Signed/

(Abu Alam Mohd. Shahid Khan)

Secretary

Local Government Department

Date: 17 November, 2011
No- Memo no.- Sthasobi/Pas-1/Di: Gra: Pa: So:/PAC-PIC/Project-01/2010/269(10)

For the information and necessary action the following persons are sent a copy:
Distribution (not in the order of seniority).

- Secretary, Planning Department, Planning Ministry, Sher-e-Bangla Nagar, Dhaka.
- Secretary, Implementation, Monitoring and Evaluation Department, Sher-e-Bangla Nagar, Dhaka.
- Director General (MAI Wing).
- Joint Secretary (PAS), Local Government Department, Bangladesh Secretariat, Dhaka.
- Chief Engineer, Department of Public Health, Dhaka.
- Additional Chief Engineer (Planning), Department of Public Health, Dhaka.
- Deputy Chief (Planning Sub-Branch), Local Government Department, Bangladesh Secretariat, Dhaka.
- Project Director, Special Rural Water Supply Project, Department of Public Health, Dhaka: (It is requested that necessary action be taken to ensure the minutes be distributed to the relevant persons).

Khaja Mia
Deputy Secretary
Phone: xxxxxxxxxx
January 29, 2016

Hon. Mohammed Nasim, MP
Minister For Health and Family Welfare,
Government of the People's Republic of Bangladesh
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Bangladesh Secretariat
Dhaka, Bangladesh

Via fax: +88-02-9559216
Via email: minister@mohfw.gov.bd

CC:
Directorate General of Health Services (DGHS)
Mohakhali
Dhaka 1212, Bangladesh

Via fax: +88-02-8813875
Via email: info@dghs.gov.bd

Dear Minister,

Human Rights Watch is an international nongovernmental organization that monitors violations of human rights by states and non-state actors in more than 90 countries around the world.

I am writing to you in reference to research Human Rights Watch is conducting regarding arsenic in drinking water of the rural population in Bangladesh. Our research to date has documented a number of serious concerns related to this issue, including:

- A small proportion of the large number of water points installed by the government in rural areas over the last 15 years or so has been intended for arsenic mitigation or targeted to those Unions of the country highly affected by arsenic;

- While the government of Bangladesh has adopted a pro-poor policy for the water and sanitation sector (2005) that would target the poor and hard-core poor in the provision of community water points, in practice the location of water points is frequently influenced by political representatives, including members of parliament and Upazila chairmen;

- There is little or no opportunity to test privately installed tubewells for arsenic, either through local Department of Public Health Engineering (DPHE) offices, or any other facilities;
• Approximately five thousand DPHE water points installed between 2006 and 2012 were contaminated with arsenic above Bangladesh’s standard for arsenic in drinking water (50 micrograms per liter);

• People in rural Bangladesh suspected of suffering from serious arsenic-related health conditions receive little or no medical care, treatment or support at health care clinics at the village, Union or Upazila levels.

Human Rights Watch is committed to producing material that is well-informed and objective. As many of our findings relate to the work of the Ministry of Health and Family Welfare, Human Rights Watch is writing to you now to ensure that our report properly reflects the views, policies and practices of the Minister of Health and Family Welfare and the Government of Bangladesh regarding arsenic in drinking water of the rural population in Bangladesh. Human Rights Watch is also writing at this time to seek information from the Ministry of Local Government, Rural Development and Cooperatives.

We hope you or your staff will respond to the attached questions so that your views are accurately reflected in our reporting. In order for us to take your answers into account in our forthcoming report, we would appreciate a written response by March 4, 2015.

In addition to the information below, please include any other materials, statistics, and government actions regarding the issue of arsenic in the drinking water of the rural population of Bangladesh that you consider would be important to understand the issue.

Thank you in advance for your time in addressing these urgent matters.

Yours sincerely,

Richard Pearshouse
Senior Researcher
Health and Human Rights Division
Human Rights Watch
Background and statistical information

1. In the Ministry of Health and Family Welfare’s Health Bulletin 2014, the Ministry noted that there were 65,910 arsenic patients in 2012. Please provide updated information for 2013-2015, if available, and describe the methods and periodicity by which the Ministry collects such data.

2. What steps, if any, does the Ministry of Health and Family Welfare take to ensure that people who do not manifest skin lesions, but who have other arsenic-related health conditions, are included in the Ministry’s list of arsenic patients?

3. How does arsenic exposure factor into the Ministry’s non-communicable disease surveillance?

4. In those unions designated by the Department of Public Health Engineering as “very high priority” and “high priority” unions for arsenic mitigation, does the Ministry of Health and Family Welfare take any additional efforts to identify people who have arsenic-related health conditions? If so, please outline such efforts.

5. Does the Ministry of Health and Family Welfare provide any training to medical professionals on the detection of arsenic-related health conditions?

Cooperation with the Department of Public Health Engineering

1. Does the Ministry of Health and Family Welfare cooperate with the Department of Public Health Engineering in any way to promote access to safe drinking water among people identified as suffering arsenic-related health conditions? If so, in what way(s)? If not, why not?

Screening and treatment

1. What is the Ministry of Health and Family Welfare’s screening and treatment protocol for people exposed to arsenic?

2. How is this protocol circulated to health facilities and monitored for implementation?

3. How has the Ministry of Health and Family Welfare’s integrated possible arsenic exposure into other screening and treatment protocols, including but not limited to cancers (of the skin, liver, kidney, bladder, and lungs), cardiovascular disease, respiratory disease, diabetes, and hypertension?

4. In 2015, did any Upazila-level health clinics report that they had no remaining treatment (such as multivitamins) for registered arsenic patients? If so, what was the extent of the unmet need (either in terms of number of patients, or number of Upazila-level health clinics that were unable to continue treatment) in 2015?

Research

1. Does the Ministry of Health and Family Welfare support research to monitor excess death and illness due to arsenic exposure? If so, please provide details.
January 29, 2016

Hon. Khandaker Mosharraf Hossain  
Minister of Local Government, Rural Development & Cooperatives  
Government of the People’s Republic of Bangladesh  
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Dhaka, Bangladesh

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Kakrail  
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Via fax: +88-02-9343375  
Via email: ce@dphe.gov.bd

Dear Minister,

Human Rights Watch is an international nongovernmental organization that monitors violations of human rights by states and non-state actors in more than 90 countries around the world.

I am writing to you in reference to research Human Rights Watch is conducting regarding arsenic in drinking water of the rural population in Bangladesh. Our research to date has documented a number of serious concerns related to this issue, including:

- A small proportion of the large number of water points installed by the government in rural areas over the last 15 years or so has been intended for arsenic mitigation or targeted to those Unions of the country highly affected by arsenic;

- While the government of Bangladesh has adopted a pro-poor policy for the water and sanitation sector (2005) that would target the poor and hard-core poor in the provision of community water points, in practice the location of water points is frequently influenced by political representatives, including members of parliament and Upazila chairmen;


Kenneth Roth, Executive Director  
Deputy Executive Directors  
Michele Alexander, Development and Global Initiatives  
Carroll Bogent, External Relations  
Iain Levine, Program  
Chuck Loebig, Operations  
Bruno Stagno Ugarte, Advocacy  
Emma Daly, Communications Director  
Dinah Pockemper, General Counsel  
James Ross, Legal and Policy Director  
Division and Program Directors  
Brad Adams, Asia  
Daniel Bekele, Africa  
Maria-Michulard Sánchez-Moreno, United States  
Alison Parker, United States  
José Miguel Vivanco, Americas  
Sarah Leah Whitson, Middle East and North Africa  
Hugh Williamson, Europe and Central Asia  
Joseph Amos, Health and Human Rights  
Shantilla Rau Bartiga, Disability Rights  
Peter Bouckaert, Emergencies  
Zama Coursen-Neff, Children’s Rights  
Richard Dicker, International Justice  
Bill Frelick, Refugees’ Rights  
Avind Ganesan, Business and Human Rights  
Ludov Gertel, Women’s Rights  
Steve Goose, Arms  
Gus Beier, Lesbian, Gay, Bisexual, and Transgender Rights  
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John Fisher, United Nations, Geneva  
Meenakshi Ganguly, South Asia  
Bénédicte Jonasson, france  
Lotte Leicht, European Union  
Sarah Margon, Washington, DC  
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Catherine Zennström
There is little or no opportunity to test privately installed tubewells for arsenic, either through local Department of Public Health Engineering (DPHE) offices, or any other facilities;

Approximately five thousand DPHE water points installed between 2006 and 2012 were contaminated with arsenic above Bangladesh’s standard for arsenic in drinking water (50 micrograms per liter);

People in rural Bangladesh suspected of suffering from serious arsenic-related health conditions receive little or no medical care, treatment or support at health care clinics at the village, Union or Upazila levels.

In the course of conducting research (in Bilmamudpur village, Aliabad Union, Fardipur Sadar Upazila in Faridpur district), Human Rights Watch was told by villagers that government officials had informed them, following installation, that government tubewells were contaminated with arsenic. This was in relation to four government tubewells and in all cases, the tubewells were still in use.

Two of the government tubewells identified in this way had a unique national water point code attached to the tubewell. One of these codes matched with a code from the Nationwide Public Water Point Mapping database which recorded that the tubewell was indeed contaminated with arsenic.

The two water point codes of government tubewells where villagers told Human Rights Watch that the government had informed them that the tubewell was contaminated are:

<table>
<thead>
<tr>
<th>Government water point code</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-01-04-29-47-13-00-001</td>
<td>0.1 mg/L</td>
</tr>
<tr>
<td>2011-01-04-29-47-13-00-021</td>
<td>Not included in database</td>
</tr>
</tbody>
</table>

This is not an exclusive list of the government tubewells in Bilmamudpur village contaminated with arsenic; there may be more.

Human Rights Watch is committed to producing material that is well-informed and objective. As many of our findings relate to the work of the Department of Public Health Engineering (DPHE), Human Rights Watch is writing to you now to ensure that our report properly reflects the views, policies and practices of the Ministry of Local Government, Rural Development and Cooperatives and the Government of Bangladesh regarding arsenic in drinking water of the rural population in Bangladesh. Human Rights Watch is also writing at this time to seek information from the Minister of Health and Family Welfare.
We hope you or your staff will respond to the attached questions so that your views are accurately reflected in our reporting. In order for us to take your answers into account in our forthcoming report, we would appreciate a written response by March 4, 2015.

In addition to the information below, please include any other materials, statistics, and government actions regarding the issue of arsenic in the drinking water of the rural population of Bangladesh that you consider would be important to understand the issue.

Thank you in advance for your time in addressing these urgent matters.

Yours sincerely,

Richard Pearshouse
Senior Researcher
Health and Human Rights Division
Human Rights Watch
Background and statistical information

1. Does the Department of Public Health Engineering (DPHE) maintain a list of all government water points (including shallow tubewells and deep tubewells) it has installed across Bangladesh? If so, please provide a summary of the number of government water points installed from 2000-2015.

<table>
<thead>
<tr>
<th>Type of water point</th>
<th>Cumulative total</th>
<th>Cumulative total currently operational</th>
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2. Does the DPHE maintain a list of all government water points (including shallow tubewells and deep tubewells) it has installed across Bangladesh according to the categorization of Unions into “very high priority” Unions, “high priority” Unions, “medium priority” Unions, “low priority” Unions and those Unions not considered for arsenic mitigation (as identified in the DPHE report *Situation Analysis of Arsenic Mitigation 2009*). If so, please provide a summary of the number of government water points installed from 2000-2015 in these categories:

<table>
<thead>
<tr>
<th>Priority of Unions:</th>
<th>Not considered for arsenic mitigation</th>
<th>Low priority</th>
<th>Medium priority</th>
<th>High priority</th>
<th>Very high priority</th>
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</thead>
<tbody>
<tr>
<td>DTW</td>
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<tr>
<td>(incl. Tara Deep)</td>
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<td>STW</td>
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<td>(incl. Tara Shallow)</td>
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<td>PWSS</td>
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<td>Cumulative total</td>
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<td>Cumulative total currently operational</td>
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</table>

3. What steps, if any, does DPHE take to make available to the general public the locations of government water points? Concretely:
a) What steps does DPHE take to make the Nationwide Public Water Point Mapping database available to the public?

b) What steps does DPHE, together with Union Porishods (local councils), take to publicize the locations of government water points at the village/Union level?

c) What steps does the DPHE take to ensure the government water points are in practice accessible to the public?

Targeting “very high” and “high” priority Unions for arsenic mitigation

1. DPHE published a list of Unions it identified as “very high” and “high” priorities for arsenic mitigation in 2010. Since the publication of that list, have those Unions been prioritized for arsenic mitigation? If so, please explain how. In particular, please explain:
   a) Has a minimum level of investment been specifically designated for new water point construction in these Unions?
   b) Has a minimum number of new government water points been allocated to Unions identified as “very high” and “high” priorities for arsenic mitigation that is higher than the number allocated for lower priority Unions?
   c) Has the DPHE adopted any other practical means to prioritise Unions it has identified as “very high” and “high” priorities for arsenic mitigation? If so, please explain what these are.

2. Does DPHE currently have any dedicated project(s) for arsenic mitigation? If not, what is the reason for this omission?

3. Does DPHE currently have any dedicated budget(s) for arsenic mitigation? If not, what is the reason for this omission?

Policy and practice of allocation

1. Please outline the standard practice of deciding how funding for construction of new water points is allocated at a national level.

2. Please outline the standard practice of deciding the annual allocation of new government water points at the district, Upazila (sub-district) and Union levels.

3. Human Rights Watch is aware of at least one DPHE project (Special Rural Water Supply Project) that is governed by a policy stating “50 per cent of the sites for allocation should be finalized after discussion with the relevant Member of Parliament of that area.” What is the legal basis for this provision?

4. Do any other DPHE projects for the installation of government water points have an official policy enabling political representatives (members of parliament, Upazila chairmen or others) to influence the locations of government water points? If so, please provide a full copy of these policies for each project.

5. What other policies govern the location of government water points?
6. What steps, if any, have been taken to implement these provisions in a way that avoids political representatives (members of parliament, Upazila chairmen or others) rewarding political allies or political supporters with government water points?

7. What steps, if any, has the Department of Public Health Engineering taken to implement the government’s ‘pro-poor policy for the water and sanitation sector’ (2005) while installing government water points?

8. Does DPHE continue to install shallow tube wells on an ongoing basis? If so, please outline any requirement for specific site assessments regarding the suitability of this particular technology prior to installation.

**Contaminated government water points**

1. According to DPHE records, how many (either as a number or a percentage of the total) government water points are contaminated with arsenic above Bangladesh’s standard for arsenic in drinking water?

2. What steps, if any, have been taken by DPHE to ensure that contaminated government water points identified in the Nationwide Public Water Point Mapping database no longer supply water contaminated with arsenic above Bangladesh’s standard?

3. Has DPHE conducted any review into why some government water points are contaminated with arsenic above Bangladesh’s standard? If so, what has been the outcome of that review?

4. Has DPHE taken any steps to ensure that no new government water points will be contaminated with arsenic above Bangladesh’s standard? If so, what are those steps?

5. Given that Human Rights Watch identified one contaminated government water point (with a government code) not listed in the Nationwide Public Water Point Mapping database, what steps have been taken to ensure that the information contained in that database is accurate and comprehensive?

6. Does the government have a policy or procedure for rehabilitating contaminated water points? If so, how many contaminated water points have been rehabilitated? If none, why not?

**Water point maintenance**

1. According to current DPHE policy, when DPHE officials become aware that a government water point is temporarily or permanently non-functional (for instance, because of technical difficulties), what steps if any do DPHE mechanics take to maintain or repair such water points?

**Water quality testing**

1. What policies or regulations govern water quality testing for arsenic?
2. Do these policies or regulations extend to private labs or testing companies?
3. For 2015, what was the combined capacity (in terms of number of possible tests) of arsenic tests of private water samples in DPHE offices? In 2015, how many well water tests of private water samples were actually performed in DPHE offices?
4. In 2015, did any DPHE offices report that they had no remaining arsenic tests for private water samples? If so, what was the extent of the unmet need (either in terms of number of test kits, or number of DPHE offices that were unable to perform arsenic tests) that was reported by DPHE offices in 2015?
5. What steps, if any, were taken to record and/or publicize results of the tests of private well water?
6. What policies and practices does DPHE have in place to guard against DPHE contractors supplying a “fake” water sample for testing (such as, for example, bottled water) following the installation of a government water point? Specifically, does DPHE undertake sampling and testing of a sub-set of recently installed government water points, to help identify any patterns of “fake” water samples?
February 12, 2016

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Via Fax: +880 933 5641
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CC: Sanjay Wijesekera
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Via Fax: 1 212 735 4413
Email: XXXXXXXXXXXXXXX

Dear Mr. Beigbeder,

Human Rights Watch is an international nongovernmental organization that monitors violations of human rights by states and non-state actors in more than 90 countries around the world. I am writing to you regarding arsenic in drinking water of the rural population in Bangladesh. Specifically, we are contacting you to provide a summary of our research findings on this issue and to ask you for information on UNICEF’s work related to this matter.

As you may know, the vast scope of the problem of arsenic in the drinking water of the rural population in Bangladesh emerged in the mid-1990s. Some twenty years later, in 2013, a nation-wide study of drinking water quality found that 12.4 per cent of samples of drinking water exceeded the Bangladesh standard of arsenic above 50 micrograms per liter — a rate that corresponds to some 20 million people exposed.

Our research to date has documented a number of serious concerns related to the government’s efforts to mitigate arsenic exposure. For example, we have found that:

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Example: we have found that:

- arsenic levels in drinking water samples exceeded the Bangladesh standard in 12.4 per cent of rural households.
- government efforts to mitigate arsenic exposure have been inadequate.
- non-state actors have failed to provide adequate support to affected populations.

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Note: This example sentence is fictional and provided for illustrative purposes only. The actual content of the letter may differ from the example.
Only a small proportion of the large number of water points installed by the government in rural areas over the last 15 years or so has been targeted for arsenic mitigation or to those Unions of the country highly affected by arsenic;

While the government of Bangladesh has adopted a pro-poor policy for the water and sanitation sector (2005) that would target the poor in the provision of community water points, in practice the location of new water points is frequently influenced by political representatives, including members of parliament and Upazila chairmen;

There is little or no opportunity for households or government officials to test for arsenic in privately installed tubewells across the country, either through local Department of Public Health Engineering (DPHE) offices, or any other laboratory facilities;

Approximately five thousand water points installed by the government between 2006 and 2012 tested positive for arsenic above Bangladesh’s standard for arsenic in drinking water (50 micrograms per liter);

People in rural Bangladesh suspected of suffering from serious arsenic-related health conditions receive little or no medical care, treatment or support at health care clinics at the village, Union or Upazila levels.

As part of our research we have also analyzed government data collected on approximately 125,000 government water points tested by DPHE in 2012 and 2013. Reviewing the data closely, we found that some water points installed by the government with UNICEF’s support were contaminated above Bangladesh’s standard for arsenic in drinking water (50 micrograms per liter).

Specifically, of the approximately 20,000 water points installed by the government under SHEWA-B (a UNICEF funded project between 2007 and 2012) approximately 1,300 tested positive for arsenic levels above the Bangladesh standard of 50 micrograms per liter.

We would be grateful for the following information:

1. Beyond monitoring the number of water points installed, did UNICEF’s SHEWA-B project include any monitoring and evaluation of any other project outcomes, (such as, for example, water safety, water point functionality, water point locations, how many people have physical access to and use
these water points, etc.)? If so, what were the indicators and what did this evaluation show?

2. Has UNICEF conducted any review into why UNICEF-supported water points are/were contaminated with arsenic above Bangladesh’s standard? If so, what has been the conclusion of that review?

3. Has UNICEF taken or supported any steps to rehabilitate contaminated UNICEF-supported water points? If so, what are those steps?

4. Has UNICEF taken or supported any steps to rehabilitate contaminated government water points? If so, what are those steps?

5. Has UNICEF taken or supported any steps to ensure that no new government water points will be contaminated with arsenic above Bangladesh’s standard? If so, what are those steps?

6. Has UNICEF taken any steps to ensure that new government water points are allocated in a way that avoids political representatives (members of parliament, Upazila chairmen or others) rewarding political allies or political supporters with government water points? If so, what are those steps?

Human Rights Watch is committed to producing material that is well-informed and objective. We hope you and your staff would be able to answer these questions so that your views are accurately reflected in our reporting. We welcome your response and any other comments you may wish to bring to our attention regarding our findings. In order for us to take your answers into account in our forthcoming report, we would appreciate a written response by March 11, 2016. Any responses or comments you wish to make will be reflected in our reporting and we may publish these responses, and this request, in full.

Sincerely,

[Signature]

Richard Pearshouse  
Senior Researcher  
Health and Human Rights Division  
Human Rights Watch
10 March 2016
WASH/2016/004

Mr. Richard Pearshouse
Senior Researcher
Health and Human Rights Division
Human Rights Watch
350 Fifth Avenue, 34th Floor
New York, NY 10118

Dear Mr Pearshouse,

Further to your letter to Edouard Beigbeder dated 12 February 2016, please find below UNICEF’s response to your questions and additional background information on arsenic in drinking water in Bangladesh.

The arsenic situation in Bangladesh is of grave concern to UNICEF due to the socio-economic and health implications on its people, particularly children.

As Human Rights Watch may already be aware, the Government of Bangladesh and Development Partners are facing challenges to accelerate arsenic mitigation programme in Bangladesh due to the scale of the problem and the absence of pre-existing capacity within the sector. With increasing degrees of difficulty, mitigation may require switching to neighbouring wells that are arsenic-safe; re-drilling wells to arsenic-safe depths; installing treatment plants/filters; and developing alternative water sources. These decisions must be underpinned by knowledge of arsenic concentrations at each specific location. In early 2000, most wells in affected areas were tested and painted green (arsenic-safe) or red (not arsenic-safe). Tube wells are constantly being replaced, and considering that arsenic testing at local level is almost nonexistent, this has had an impact on arsenic mitigation efforts in Bangladesh.

The Government of Bangladesh’s 7th 5-Year plan articulates its commitment to provide safe water to all its citizens by 2020. UNICEF’s mandate is to support the government to fulfil this commitment through building the capacity of the water and sanitation sector; evidence based advocacy and demonstration of scalable models and strategies; action research and the review/development of policies and strategic documents for the sector.

Within this framework of support, UNICEF’s arsenic mitigation programme in Bangladesh is focused on assisting the government to implement water safety planning (risk assessment and risk management approach); systematically monitoring arsenic levels in drinking water; marking wells that should not be used for drinking or cooking; finding low-cost alternative safe water supplies; and helping to change knowledge and practices to protect vulnerable populations from arsenic poisoning.

UNICEF’s approach to arsenic mitigation in drinking water in Bangladesh is from a preventive water safety perspective with the aim of improving the sector’s precision1 in providing arsenic-safe drinking water.

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1 Precision refers to the ability to provide safe water at first attempt and to know the water quality before development for drinking.
Assisting the government with reliable data on the status of arsenic in the country is an important aspect of our support. The UNICEF supported Multiple Indicator Cluster Survey (MICS 2012-2013) indicates that 19.7 million people in Bangladesh (12% of the total population) are still exposed to arsenic contamination above the Bangladesh Drinking Water Quality standard. The scale and multi-dimensional nature of the arsenic challenge in Bangladesh necessitates collaboration and harmonization of strategies to create much-needed impact at scale.

Based on lessons learned from previous water supply programmes, the UNICEF-advocated harmonized approach identifies critical bottlenecks to arsenic mitigation and galvanizes sector support to address them in a focused manner. UNICEF’s advocacy has resulted in a strong emphasis in the newly developed National Implementation Plan on Arsenic Mitigation (IPAM) on the needs for a coordinated approach by the sector.

With reference to your specific questions on how UNICEF has supported the Government of Bangladesh in its endeavour to provide safe water, I would like to make the following points:

**Question 1:** The UNICEF-supported SHEWA-B project used a monitoring system with indicators that covered the type of water option, depth of the water point, water quality (arsenic and iron), water point functionality, accessibility, year around supply and number of users. UNICEF’s robust monitoring and evaluation system revealed that 1,733 SHEWA-B wells, out of 20,597 installed wells, do not meet the national water quality standards for arsenic. UNICEF undertook necessary actions to rehabilitate/replace 1,733 wells and completed the project in September 2015.

**Question 2:** An assessment by UNICEF and the Department of Public Health Engineering (DPHE) to determine why some DPHE-UNICEF supported water points were contaminated recognized that a specific clause in the government’s drilling contract stipulates ‘no success, no payment’ which made the contractor liable for arsenic contaminated water points. This clause may have discouraged a transparent and honest process of collection and submission of water samples for testing. In 2013, new National Drilling Guidelines were developed by a committee including the DPHE, UNICEF and JICA. Importantly, these new guidelines included removal of the clause linking water quality to payment for drilling a well.

**Question 3:** Following consultations with the government and key sectoral partners, a series of actions were agreed and initiated to restore confidence in the safety of drinking water provided through the SHEWA-B programme. UNICEF and the DPHE developed and implemented a joint Arsenic rehabilitation project which included re-testing and re-painting (red/green) of all of the SHEWA-B programme wells, strengthening laboratory procedures and rehabilitating 1,733 arsenic-contaminated wells. The project was completed in September 2015.

**Question 4:** UNICEF assisted the DPHE to determine the water quality status of government provided water points as a first step towards strengthening monitoring systems in Bangladesh and developed an Integrated National Water Point Database. In 2013, UNICEF supported the government to conduct a nationwide mapping of all water points constructed by DPHE between 2006 and 2012. Information on 125,000 water points was uploaded into the database, which forms the basis of the current DPHE MIS/GIS system. The inclusion of parameters on water quality, depth of the water point, functionality as well as water point locations provided the government with essential information for decision making and management actions for provision of context-specific safe water options. The nationwide water point mapping revealed that 5,000 water points were contaminated. These wells were marked in compliance with the UNICEF-advocated strategy. Advocacy to the sector for comprehensive screening has resulted in the government and the World Bank undertaking blanket screening and marking of wells in 184 unions.
Question 5: Steps taken by UNICEF to assist the government and the sector to prevent arsenic contamination of drinking water has focused on addressing the root causes of arsenic contamination of drinking water. Specific steps that have sector significance include:

a) *Development of a sectoral strategy for arsenic safe water delivery*: UNICEF recognised that an appropriate sector strategy (protocol) for providing arsenic safe water will improve the sector’s precision in the provision of arsenic safe water. The main elements of the strategy are: (i) 3-tier water quality monitoring; (ii) site-specific assessments; (iii) establishment of a technical committee to advise on appropriate site specific water supply technologies; (iv) quality assurance of water points; (v) sensitisation and capacity building of the local communities to operate and maintain water points. UNICEF will continue to advocate for the use of the strategy by the sector and build government and sector capacity to implement it. UNICEF’s advocacy has resulted in the inclusion of the strategy in the National IPAM as a viable protocol for use by the sector.

b) *Demonstration of scalable models*: UNICEF developed the ‘arsenic safe village model’ and implemented it through sector partners between 2012 and 2015. The model has resulted in the declaration of 126 arsenic safe villages in some of the most arsenic contaminated districts of Bangladesh. The arsenic safe village model has been noted in the National IPAM and is presently applied by DPHE in three of the most arsenic contaminated Upazilas (sub-district) in Bangladesh.

c) *Review of policy and legislation*: UNICEF in partnership with JICA and the World Bank is developing an accountability framework for water quality testing and screening of water points. The advocacy thrust is for the Ministry of Local Government, Rural Development and Cooperatives to issue a government circular assigning responsibilities for drinking water safety (for all people, at all times, in all places) between different entities.

d) *Capacity building*: UNICEF has provided capacity building support to DPHE to strengthen its ability to conduct feasibility assessments and perform quality assurance monitoring of new constructions. Other areas of capacity building include water quality testing, water safety planning, construction of arsenic and iron removal plants, training on data processing and documentation in relation to management information systems. UNICEF also provides support to non-governmental organisations working in the water sector.

e) *Research and documentation*: UNICEF supported the production of district-wise technology maps to increase capacity of stakeholders to select site-specific appropriate technological option. An Arsenic Primer produced by UNICEF provides technical guidance and an update on the known global occurrence of arsenic contamination and technical guidance on treatment methods in Bangladesh and other arsenic affected countries.

f) *Improved monitoring system*: As part of improving national monitoring systems, UNICEF included a water quality indicator on arsenic in the 2009 MICS and faecal coliforms and arsenic in the 2012-2013 MICS. UNICEF is currently a member of the advisory committee on the National Water Quality Surveillance pilot in Bangladesh.

Question 6: UNICEF ensures that the stipulated site selection criteria for UNICEF-supported water points are pro-poor and decisions are made with community consultations. UNICEF-supported arsenic mitigation programmes are located in the most arsenic contaminated districts/Upazilas. In the ongoing DPHE-UNICEF arsenic mitigation project, selection has been enhanced by a vulnerability risk assessments (VRA) to select the target unions. VRA provides an evidence base for selection thus avoiding political interference in water point locations.
With reference to the point on arsenic-related health implications, UNICEF advocates for strong collaboration between the health and water supply sectors. Some of the concrete steps taken to facilitate the integration include: (a) the use of the number of arsenicism patients as a key indicator in the VRA; (b) the arsenic safe village model includes sensitisation and awareness on health implications of arsenic exposure; (c) the development of a joint arsenic mitigation programme with the World Health Organisation, which has a major element of arsenicism patient management and includes a health impact study.

UNICEF remains committed in supporting the Government of Bangladesh in its efforts to provide safe drinking water and will continue advocating for the adoption of the harmonised approach for accelerating arsenic mitigation in the country. The scale of the problem is large and UNICEF is of the firm belief that harnessing lessons from a wide range of experience, collaboration and harmonisation of interventions to address specific challenges will accelerate and scale up the progress in arsenic mitigation in drinking water in Bangladesh.

Do get in touch should you require any further information or clarification.

Yours sincerely,

Hrachya (Charlie) Sargsyan
Chief, Water, Sanitation and Hygiene (WASH)
UNICEF Bangladesh
February 16, 2016

Annette Dixon, World Bank Vice President
South Asia
1818 H Street, NW
Washington, DC 20433 USA

Fax: +1 202 477 6391
Email: XXXXXXXXXXXXXXXXXXX

CC: Rajashree Paralkar, Operations Manager for Bangladesh
World Bank Bangladesh Office
Plot # E-32
Sher-e-Bangla Nagar,
Agargaon, Dhaka 1207, Bangladesh

Fax: +880 933 5641
Email: XXXXXXXXXXXXXXXXXXX

Dear Ms. Dixon,

Human Rights Watch is an international nongovernmental organization that monitors violations of human rights by states and non-state actors in more than 90 countries around the world.

I am writing to you regarding arsenic in drinking water of the rural population in Bangladesh. Specifically, we are contacting you to provide a summary of our research findings on this issue and to ask you for information on the World Bank's work related to this matter.

As you may know, the vast scope of the problem of arsenic in the drinking water of the rural population in Bangladesh emerged in the mid-1990s. Some twenty years later, in 2013, a nation-wide study of drinking water quality found that 12.4 per cent of samples of drinking water exceeded the Bangladesh standard of arsenic above 50 micrograms per liter — a rate that corresponds to some 20 million people exposed.

Our research to date has documented a number of serious concerns related to the government’s efforts to mitigate arsenic exposure. For example, we have found that:

- Only a small proportion of the large number of water points installed by the government in rural areas over the last 15 years or so
has been targeted for arsenic mitigation or to those Unions of the country highly affected by arsenic;

- While the government of Bangladesh has adopted a pro-poor policy for the water and sanitation sector (2005) that would target the poor in the provision of community water points, in practice the location of new water points is frequently influenced by political representatives, including members of parliament and Upazila chairmen;

- There is little or no opportunity for households or government officials to test for arsenic in privately installed tubewells across the country, either through local Department of Public Health Engineering (DPHE) offices, or any other laboratory facilities;

- Approximately five thousand water points installed by the government between 2006 and 2012 tested positive for arsenic above Bangladesh’s standard for arsenic in drinking water (50 micrograms per liter);

- People in rural Bangladesh suspected of suffering from serious arsenic-related health conditions receive little or no medical care, treatment or support at health care clinics at the village, Union or Upazila levels.

As part of our research we have also analyzed government data collected on approximately 125,000 government water points tested by DPHE in 2012 and 2013. Reviewing the data closely, we found that approximately five thousand government water points installed between 2006 and 2012 were contaminated with arsenic above Bangladesh’s standard for arsenic in drinking water (50 micrograms per liter).

We are aware that under the World Bank’s ‘Water Supply Program Project’ (2004-2010) some 13,000 rural water points were installed by the government with the World Bank’s support. We are also aware that under the World Bank’s ‘Rural Water Supply and Sanitation Project’ (2012-ongoing) the Bank envisages support to the government in installing a further 14,000 rural water points (and that some work on installation has commenced.)

We would be grateful for the following information:

1. Beyond monitoring the number of water points installed, did the World Bank’s ‘Water Supply Program Project’ include any monitoring and evaluation of any other project outcomes, (such as, for example, water safety, water point functionality, water point locations, how many people have physical access to and use these water points, etc.)? If so, what were the indicators and what did this evaluation show?
2. Has the World Bank conducted any review into whether World Bank supported water points are/were contaminated with arsenic above Bangladesh’s standard? If so, what has been the conclusion of that review?

3. If the World Bank supported water points are/were contaminated with arsenic above Bangladesh’s standard, has the World Bank taken or supported any steps to rehabilitate contaminated World Bank-supported water points? If so, what are those steps?

4. Has the World Bank taken or supported any steps to rehabilitate contaminated government water points? If so, what are those steps?

5. Has the World Bank taken or supported any steps to ensure that no new government water points will be contaminated with arsenic above Bangladesh’s standard? If so, what are those steps?

6. Has the World Bank taken any steps to ensure that new government water points are allocated in a way that avoids political representatives (members of parliament, Upazila chairmen or others) rewarding political allies or political supporters with government water points? If so, what are those steps?

7. Has the World Bank been working with the government to improve access to medical care, treatment or support at health care clinics at the village, Union or Upazila levels for people suspected of suffering from serious arsenic-related health conditions? If so, please detail. Why did the World Bank’s Arsenic Public Health Project (2002) not proceed?

Human Rights Watch is committed to producing material that is well-informed and objective. We hope you and your staff would be able to answer these questions so that your views are accurately reflected in our reporting. We welcome your response and any other comments you may wish to bring to our attention regarding our findings. In order for us to take your answers into account in our forthcoming report, we would appreciate a written response by March 11, 2016. Any responses or comments you wish to make will be reflected in our reporting and we may publish these responses, and this request, in full.

Sincerely,
Richard Pearshouse
Senior Researcher
Health and Human Rights Division
Human Rights Watch
March 13, 2016

Mr. Richard Pearshouse
Senior Researcher
Health and Human Rights Division
Human Rights Watch
350 Fifth Avenue, 34th Floor
New York, NY 10118-3299

Dear Mr. Pearshouse,

Thank you for your letter dated February 16, 2016 to Ms. Annette Dixon sharing your research findings and emphasizing the dangers of arsenic in drinking water for the people of Bangladesh. She has asked me to respond on her behalf.

As you know, roughly 1 billion people around the world lack access to safe drinking water. In Bangladesh, around 20 million people still lack access to safe drinking water and addressing the issues of arsenic contamination of groundwater is a major part of this challenge. The Bangladesh Government has invited support from the UN, civil society organizations, bilateral and multilateral donors to help address water safety challenges and the World Bank has been part of this effort since 1998.

Please find below our responses to the questions in your letter:

1. Along with monitoring the number of water points installed, the World Bank’s Bangladesh Water Supply Program (BWSP – 2004-2010) also monitored and evaluated the following outcomes: water quality, the beneficiaries served, and consumer satisfaction (through a beneficiary and stakeholder survey conducted at the end of the project). The survey found the wells were functioning and providing acceptable quality of water; consumers were generally satisfied with access and location. Please note that all BWSP wells were included in the government’s testing of 125,000 public water points installed between 2006 and 2012 under the National Water Point Mapping Programme.

2. The World Bank has conducted reviews into whether World Bank-supported water points are/were contaminated with arsenic in the projects it has undertaken and has sought to use its experience in these projects to improve the effectiveness of these reviews. A review under the Bangladesh Arsenic Mitigation Water Supply Project (BAMWSP – 1998-2004) cross-checked water quality tests in the Netherlands. Out of 1,617 samples there were seven samples exceeding the Bangladesh arsenic contamination standard of 50 ppb, with a maximum contamination found of 71 ppb. The Department of Public Health Engineering (DPHE) tested all public wells installed during 2006-2012. Around 5,000 of 125,000 public wells were found to be contaminated. This may include some BWSP wells although DPHE did not identify them as such. All these 5,000 wells were painted red to show they are unsafe and there is a high level of community awareness that red wells are unsafe for drinking water. The ongoing Bangladesh Rural Water Supply and Sanitation Project (BRWSSP – 2014-2017) has introduced improved water quality monitoring protocols. DPHE laboratories test all installed water points. Surveillance monitoring of about 300,000 existing wells is done under the project to ensure arsenic safety of these sources. The project has also initiated third-party monitoring checks by
independent entities such as the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B).

3. Rehabilitation of a well is not always possible as water quality principally depends on the aquifer and not on the well. If a well is found to have arsenic at above the contamination standard, it is painted red to differentiate it from safe wells that are painted green. Continuing public awareness campaigns ensure that rural people have a high level of awareness about not using the red-painted wells for drinking water. If the Bank finds evidence of contaminated wells installed under Bank projects, we take steps to ensure that the wells were marked red to protect people's health. Under the BRWSSP, community awareness program is followed by arsenic screening of existing wells, and development of a community action plan for new tube well installations.

4. To date, we have not been asked to assist in the rehabilitation of government wells. Please see the answer above regarding the limits of rehabilitation.

5. We are helping the government with improved protocols through the ongoing BRWSSP to address the health dangers posed by new government water points being contaminated by arsenic above Bangladesh's standard. The new drilling contract under the project not only reduces the likelihood of a contaminated well being constructed, it also makes drillers more willing to work in water scarce areas and encourages drillers to report on water quality. This has been possible through the government's policy of making drillers reach for a specified depth irrespective of the water quality. If the water quality of a new well is then found to be bad, appropriate mitigation, such as adding an arsenic removal plant, will be undertaken to ensure a safe water supply. The ongoing BRWSSP also follows the same approach. We are also working with DPHE to introduce a system of registration for private drillers that would among other things also train and equip them to test for arsenic.

6. The World Bank has taken steps in its own projects to limit how political influence can decide on the allocation of water points. In the World Bank projects, the allocation for the water points are not subject to any consultation with public representatives, such as local Member of Parliament. Bank-funded projects have a community participatory process and follow a set criteria for the selection of target beneficiaries. Under BRWSSP, the communities decide the mitigation options and installation sites, which are cross-checked by the local and regional DPHE setup. Additionally, the Bank is planning to undertake Geographical Information System mapping of arsenic contaminated and project water points. This will enable us to understand the union-scale effectiveness and equity of water point siting supplemented by third party monitoring of randomly selected wells to confirm existence, functionality, water quality, usage and sanitary protection.

7. The World Bank is working with the Directorate General of Health Services (DGHS) through the Bank-led Health Sector Development Program, which conducts awareness raising activities for arsenic mitigation as well as the training of health care service providers. Suspected cases of arsenicosis are screened at public health facilities and DGHS ensures the supply of essential medicines, diagnostic tools, and other logistics to health facilities at district and upazila levels for proper diagnosis and treatment. DGHS has also forged strategic partnerships with local bodies and community based organizations for effective mitigation programs. Regarding your question about the 2002 Arsenic Public Health Project, we are attempting to find out why this project of 14 years ago did not proceed. Our public project database shows it was prepared but then did not go ahead for Board approval.
We hope that this information is helpful for your research. Please do not hesitate to contact me should you have any additional questions.

Sincerely,

\[Signature\]

Qimiao Fan
From: Richard Pearhouse
Sent: Friday, March 18, 2016 2:35 PM
To: 'Mohammad Baharul Alam', Qimiao Fan
Cc: Alexander Anthony Ferguson; Jessica Evans; Meg Mazuco

Dear Mr. Fan,

Thank you for your letter dated March 13. I have a follow-up question and wanted to spell out one of our concerns and report recommendations in advance of publication:

With regards to the answer to question 3 in your letter, I note that according to our investigations not all contaminated government tubewells have been painted red. Further, we found that the marking of contaminated wells red does not in practice prevent people from using contaminated water points for drinking water — particularly where there are few or no tested and marked safe water points in the immediate vicinity. I would like to seek further clarity, specifically regarding your view that "rehabilitation of a well is not always possible". This appears at odds with UNICEF’s actions to replace or rehabilitate all 1,733 UNICEF-supported wells it identified as contaminated in 2012-2013. It also appears at odds with the revised protocol you mention, apparently in use during the bank’s current BRWSSP project, whereby: “If the water quality is found to be bad, appropriate mitigation, such as adding an arsenic removal plant, will be undertaken to ensure a safe water supply.” Could you please you clarify why you consider it is not possible to rehabilitate or replace some or all of the 5,000 contaminated government water points identified by the DPHE screening in 2012-2013?

With respect to the outcome of DPHE testing of 125,000 water points installed from 2006 to 2012, as discussed in your answer to question 3, it appears there is a risk that some bank-supported water points may be contaminated. As you noted, the data did not include information on whether bank-supported water points are among those that are contaminated. In addition, the DPHE testing of approximately 125,000 water points covers only 85 percent of all government wells installed during this period (and none that were built before 2006). In light of this, I wanted to let you know that we will recommend in our report that the bank conduct a review into whether bank-supported water points under the Bangladesh Water Supply Program (2004-2010) are indeed contaminated, and take steps to replace or rehabilitate any that are.

We welcome your response and any other comments you may wish to bring to our attention regarding our findings and recommendations. In order for us to take your answers into account in our forthcoming report, we would appreciate a written response by March 25, 2016.

Best regards,
Richard Pearhouse
Mr. Richard Pearshouse  
Senior Researcher  
Health and Human Rights Division  
Human Rights Watch  
350 Fifth Avenue, 34th Floor  
New York, NY 10118-3299  

Dear Mr. Pearshouse,

Thank you for sharing your concerns and recommendations regarding question 3 in our earlier correspondence to you. I also very much appreciate your sharing the planned recommendations in your report.

Please find below our responses to your follow-up questions and comments:

**Awareness on red-painted, unsafe tube wells:** Thank you for telling us about your research that indicates that not all contaminated government tube wells are painted red and that painting wells red is no guarantee that people will not use them for drinking water. We are concerned by what you report and its implications for public health. We would welcome seeing these findings as currently we are not aware of any study available about the drinking patterns of the rural population, particularly in the arsenic contaminated areas. For information on this issue, we largely depend on the verbal testimony of people in rural areas. This evidence suggests that people in most cases collect safe drinking water from distant green-painted wells rather than nearby red-painted wells. It is important to continue strengthening public awareness about red-painted tube wells to eliminate the risk of arsenic contamination.

**Rehabilitation of a Well:** Let me elaborate on our earlier response. We follow the same protocol as UNICEF regarding rehabilitation, and share the same view that the rehabilitation should be considered as 'rehabilitate the scheme' not 'rehabilitate the well'. Rehabilitating a single well will not work because when an aquifer is contaminated the water from that aquifer is also contaminated. The rehabilitation needs to be done on an area-by-area basis.

To ensure safe water, the first step should be to check different aquifer layers for better water quality. If the water quality of an aquifer is not good, then the only way to ensure arsenic-free water is to remove the arsenic from the water. At the community level, installation of an Arsenic Removal Plant may be economically feasible to treat the contaminated water subject to availability of land and funds and depending on the water characteristics and operators' requirements. Otherwise, the communities can use proven alternatives such as domestic Point-of-Use Arsenic filters. These are available in the market at a reasonable cost.

The World Bank-financed BRWSSP and BWSSP installed hand-pumped tube wells. Arsenic Removal Plants have been considered as mitigation options under the ongoing
BRWSSP, in those cases when water quality could not be ensured following well boring. The drillers first try to reach for a safe aquifer. However, if the water quality cannot be ensured even after drilling at an appropriate specified depth, the well is declared abandoned and painted red with community consent confirming that the well will be used for purposes other than for drinking and cooking.

**Recommended review of BWSPP Wells:** We fully agree with your recommendation for undertaking a review into whether any of the Bank-supported water points under the Bangladesh Water Supply Program Project (BWSPP) are contaminated. In this regard, we look forward to working with the Department of Public Health Engineering (DPHE) to systemically identify the wells (if any) from their screening results.

The World Bank is also considering a separate review to identify if there are contaminated BWSPP wells if DPHE cannot identify the contaminated BWSPP wells. The review will be helpful to provide more information about the sustainability of interventions, including: (i) current water quality; (ii) number of users; (iii) distance to the nearest alternative safe devices; (iv) awareness of arsenic risk; (v) GPS mapping; (vi) breakdown history; (vii) attitudes and mitigation seeking behavior; and (viii) satisfaction. Based on the results of the review, we would decide whether further action is needed subject to discussion and agreement with DPHE. We look forward to your suggestions as we design the survey.

We hope that this information is helpful for your research. Please do not hesitate to contact me should you have any additional questions.

Sincerely,

[Signature]

Qimiao Fan
Annex 5:

1. *Balia (Ulania Union, Mehendiganj Upazila, Barisal District)*

When Human Rights Watch visited Balia, it located 9 deep tubewells, all of which were functioning and accessible.

<table>
<thead>
<tr>
<th>Location</th>
<th>Approx. recorded depth</th>
<th>Type of device</th>
<th>Functionality</th>
<th>Accessibility</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>290 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>270 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td>Caretaker is local political representative</td>
</tr>
<tr>
<td>3. Beside orphanage</td>
<td>270 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>270 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td>Caretaker is local political representative</td>
</tr>
<tr>
<td>5</td>
<td>270 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>270 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>7 In primary school</td>
<td>270 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>270 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td>Caretaker is government functionary</td>
</tr>
<tr>
<td>9</td>
<td>280 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
</tbody>
</table>
2. Bilmamudpur (Aliabad Union, Faridpur Sadar Upazila, Faridpur District)

When Human Rights Watch visited Bilmamudpur, it located 16 government-installed water points. Of these 10 were working and accessible, while one was not functional, and 5 were located inside the caretaker’s perimeter. For 5 water points, the caretaker told Human Rights Watch that they had been informed by the government that the tubewell was contaminated with arsenic.

<table>
<thead>
<tr>
<th>Location</th>
<th>Approx. recorded depth</th>
<th>Type of device</th>
<th>Functionality</th>
<th>Accessibility</th>
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<td>70 m</td>
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<td>Inside perimeter</td>
<td>Government claims contaminated.</td>
</tr>
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<td>70 m</td>
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<td>Accessible</td>
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</tr>
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<td>Functional</td>
<td>Inside perimeter</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>150 m</td>
<td>STW</td>
<td>Functional</td>
<td>Accessible</td>
<td>Caretaker is a government functionary.</td>
</tr>
<tr>
<td>6.</td>
<td>10 m</td>
<td>Ringwell</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>10 m</td>
<td>Ringwell</td>
<td>Functional</td>
<td>Inside perimeter</td>
<td>Used by one family of 4 people.</td>
</tr>
<tr>
<td>8.</td>
<td>170 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td>Government claims contaminated.</td>
</tr>
<tr>
<td>9.</td>
<td>170 m</td>
<td>DTW</td>
<td>Functional</td>
<td>Inside perimeter</td>
<td>Used by one family of 6 people.</td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>At union parishad office</td>
<td>DTW</td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td></td>
<td>DTW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td></td>
<td>Ring well</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td></td>
<td></td>
<td>Functional</td>
<td>Accessible</td>
<td>Government claims contaminated.</td>
</tr>
<tr>
<td>16.</td>
<td></td>
<td>Dug well</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
</tbody>
</table>
3. Ruppur (Pakshi Union, Ishwardi Upazila, Pabna District)

When Human Rights Watch visited Ruppur, it identified 18 government-installed water points. 6 were found functional and accessible, 6 did not function and 6 were located inside a household perimeter.

<table>
<thead>
<tr>
<th>Location</th>
<th>Approx. recorded depth</th>
<th>Type of device</th>
<th>Functionality</th>
<th>Accessibility</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>30 m</td>
<td>STW</td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>40 m</td>
<td>STW</td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>30 m</td>
<td>STW</td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>30 m</td>
<td>STW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>80 m</td>
<td>STW</td>
<td>Functional</td>
<td>Inside perimeter</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>School</td>
<td>DTW with arsenic removal plant</td>
<td>Functional</td>
<td>Accessible</td>
<td>Only used during religious festivals, approx. 10 days a year.</td>
</tr>
<tr>
<td>8.</td>
<td></td>
<td></td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td>STW</td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>STW</td>
<td>Functional</td>
<td>Inside perimeter</td>
<td>Used by 1 family of 5 people.</td>
</tr>
<tr>
<td>11.</td>
<td>95 m</td>
<td>STW</td>
<td>Functional</td>
<td>Accessible</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td>Ring well</td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>50 m</td>
<td>STW</td>
<td>Functional</td>
<td>Inside perimeter</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>50 m</td>
<td>STW</td>
<td>Functional</td>
<td>Inside perimeter</td>
<td>Caretaker's family member is a government functionary; used by 1 family of 5 people.</td>
</tr>
<tr>
<td>15.</td>
<td>Local NGO</td>
<td>50 m</td>
<td>STW</td>
<td>Functional</td>
<td>Accessible</td>
</tr>
</tbody>
</table>
4. Iruain (Kandirpur Union, Laksam Upazila, Comilla District)

Human Rights Watch identified 12 government-installed water points in Iruain. 8 were not functional and 4 were located inside perimeter of the well caretaker. There were no functioning and publicly accessible water points installed by the government.

<table>
<thead>
<tr>
<th></th>
<th>Location</th>
<th>Approx. recorded depth</th>
<th>Type of device</th>
<th>Functionality</th>
<th>Accessibility</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>250 m</td>
<td>DTW</td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>190 m</td>
<td></td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td>190 m</td>
<td></td>
<td>Functional</td>
<td>Inside perimeter</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td>190 m</td>
<td></td>
<td>Not functional</td>
<td></td>
<td>Caretaker’s family member is a government functionary.</td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td>190 m</td>
<td></td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>180 m</td>
<td></td>
<td>Functional</td>
<td>Inside perimeter</td>
<td>Caretaker is a local political representative; used by 2 households.</td>
</tr>
<tr>
<td>7.</td>
<td></td>
<td>170 m</td>
<td></td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Primary school</td>
<td>200 m</td>
<td></td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td></td>
<td>190 m</td>
<td></td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>190 m</td>
<td></td>
<td>Functional</td>
<td>Inside perimeter</td>
<td>Used by 10-15 people.</td>
</tr>
<tr>
<td>11.</td>
<td></td>
<td>190 m</td>
<td></td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td></td>
<td>200 m</td>
<td></td>
<td>Functional</td>
<td>Inside perimeter</td>
<td>Caretaker’s family member connected to upazila chairman; used by one family of 6 people.</td>
</tr>
</tbody>
</table>
5. Tilchandi (Haizadi Union, Araihazar Upazila, Narayanganj District)

Tilchandi had a government-installed tubewell (in the local primary school). It is no longer functional, meaning there were no functioning and publicly accessible government-installed water points in the village.

<table>
<thead>
<tr>
<th></th>
<th>Location</th>
<th>Approx. recorded depth</th>
<th>Type of device</th>
<th>Functionality</th>
<th>Accessibility</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>School</td>
<td></td>
<td></td>
<td>Not functional</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>