Mandates of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health; the Special Rapporteur on extreme poverty and human rights; and the Special Rapporteur on the human right to safe drinking water and sanitation

REFERENCE:
AL BGD 4/2016

21 June 2016

Excellency,

We have the honour to address you in our capacities as Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health; Special Rapporteur on extreme poverty and human rights; and Special Rapporteur on the human right to safe drinking water and sanitation, pursuant to Human Rights Council resolutions 24/6, 17/13 and 24/18.

In this connection, we would like to bring to your attention information we have received concerning the presence of arsenic in the drinking water of vast areas of Bangladesh and the resulting negative impacts on the human rights of the affected population to water, health, life and effective remedies.

According to the information received:

Arsenic occurs naturally in Bangladesh’s groundwater and affects hand-pumped, mostly shallow, tubewells across vast expanses of rural Bangladesh. The chance of a well drawing groundwater contaminated with arsenic greatly depends on the depth of the tubewell: in general terms, the deeper the tubewell, the lower the concentration of arsenic. An approximate estimate of the number of shallow tubewells across the country is about 10 million.

The proliferation of shallow tubewells in rural Bangladesh is attributed to the public health campaign in the 1970s and 1980s, aimed at combating cholera and other water-borne diarrheal diseases, which had long been major causes of infant mortality in Bangladesh. The Government, with the support of international organizations and donors, most notably UNICEF and the World Bank, installed hand-pumped shallow tubewells in rural areas to provide the rural communities with access to safe drinking water. By 1991, there was reportedly an estimated 2.5 million tubewells in rural areas of Bangladesh, contributing to a significant decline in the infant mortality rate. The water from the tubewells was never tested for the level of arsenic at the time, although the presence of arsenic in groundwater in this region was reportedly known in the 1980s. It was only in 1993 that the Department of Public Health Engineering in Bangladesh officially confirmed a case of arsenic contamination in the western district of Nawabganj.

1 David Kinley and Zabed Hossain, Poisoned waters: Bangladesh, desperately seeking solutions, World Watch (Jan / Feb 2003), 22-27.
2 Human Rights Watch, Nepotism and Neglect (2016), at 22.
3 See e.g. Mushtaque R Chowdhury, Arsenic Crisis in Bangladesh, Scientific American (August 2004), at 87. Fred Pearce, Bangladesh’s arsenic poisoning: Who is to blame? The UNESCO Courier (January 2001).
and arsenic emerged as a public health concern. In 2000, the British Geological Survey (BGS) also surveyed a sample of about 3,500 tubewells nationwide and estimated that at least 1.5 million tubewells in Bangladesh were heavily contaminated beyond the national standard of 50 parts per billion (ppb), exposing approximately 35 million people to serious arsenic contamination. With an estimated total population of 132 million in 2000, approximately 26 percent of the population in Bangladesh was exposed to contaminated tubewells. The estimated number of persons exposed to arsenic concentrations above the WHO standard of 10 ppb stood at 57 million.

Following the discovery of arsenic, institutional responses to the crisis were reportedly robust in initial stages. The Government and international donors made concerted efforts to test the quality of water from wells and to take mitigation measures. In 1998, the World Bank began to support the Bangladesh Arsenic Mitigation Water Supply Project (BAMWSP), which aimed to, inter alia, screen about 3.04 million wells and to provide arsenic-safe water in 4,000 affected villages. From 2000 to 2003, UNICEF also supported the Government in surveying about 1.5 million wells in arsenic prone-areas. The Government established an Inter-Ministerial Secretaries Committee on arsenic and adopted in 2004 the National Policy for Arsenic Mitigation and the Implementation Plan for Arsenic Mitigation. With the World Bank’s support, in 2003, the Government also created an Arsenic Policy Support Unit (APSU) to coordinate activities of many organizations undertaking mitigation efforts. Under the BAMWSP, the National Arsenic Mitigation Information Centre (NAMIC) was also established to collect and disseminate information about arsenic and to maintain a database containing data on, inter alia, the spatial distribution of arsenic and water quality test results. By 2005, almost 5 million tubewells were tested across the country, and approximately 1.4 million wells, found to contain levels of arsenic above the national standard, were painted red to warn the people of the danger. In parallel, the World Bank, UNICEF and other international donors supported projects to install new safe water sources and to distribute arsenic removal filters.

However, these measures were insufficient to mitigate the massive scale of arsenic contamination and allegedly failed to properly target areas with a high level of contamination. According to an analysis conducted in 2009, only 4 million out of the total 9 million residents in areas where greater than 80 per cent of wells were marked with an unsafe level of arsenic were provided with

4 FAO, UNICEF, WHO and WSP, Towards an Arsenic Safe Environment in Bangladesh (22 March 2010) at 12
5 David Kinley and Zabed Hossain, Poisoned waters: Bangladesh, desperately seeking solutions, World Watch (Jan / Feb 2003), 22-27.
6 David Kinley and Zabed Hossain, Poisoned waters: Bangladesh, desperately seeking solutions, World Watch (Jan / Feb 2003), 22-27.
7 Fred Pearce, Bangladesh’s arsenic poisoning: Who is to blame? The UNESCO Courier (January 2001).
alternative safe water options by the Government.\textsuperscript{10} Furthermore, the institutional response to the water crisis soon lost the momentum and the progress on arsenic mitigation stalled. The Inter-Ministerial Secretaries Committee discontinued its regular meetings and the APSU was disbanded by 2008.\textsuperscript{11} The World Bank’s BAMWSP came to an end in 2007, which also led to the closure of the NAMIC. Much of the administrative infrastructure built by the government and international donors to address arsenic in drinking water from 1998 to 2006 reportedly no longer exists.

The absence of adequate institutional structure and measures to control arsenic has left millions of the affected population to their own device, exposing them to the risk of arsenicosis and other diseases. Today, it is estimated that almost 40 million people continue to drink water with arsenic above the internationally accepted standard of 10 ppb, and there are indications that the number of affected population may be on the rise. In 2009, the Bangladesh Multiple Indicator Cluster Survey took drinking water samples from approximately 13,000 randomly selected households across the country to test for arsenic: 12.6 percent of household samples exceeded the national standard of 50 ppb, while 23.1 percent exceeded the WHO standard of 10 ppb. With an estimated population of 150 million in 2009, this corresponded to approximately 18.6 million exposed above the Bangladesh limit and 37.2 million above the WHO limit in 2009. The results from the Multiple Indicator Cluster Survey in 2012-13, which also tested approximately 13,000 water samples from household samples, indicated nearly identical results: 12.4% of samples contained more than the national standard, while 24.8% of samples contained more than the WHO standard. The results indicated an increase in the population at risk: 19.4 million (12 percent of the population) were drinking water contaminated above the Bangladesh limit and 38.9 million (25 percent of the population) above the WHO limit.

\textit{(i) Impact on the rights to life, health, safe drinking water and non-discrimination}

Exposure to high amounts of arsenic, such as through accidents or deliberate poisoning can result in seizures, coma, cardiovascular collapse, and death. The main causes of death are cancers and cardiovascular and lung diseases. Exposure to lower doses can also have severe health consequences, although these will take many years to develop.

Comprehensive research published in 2012 by researchers working for UNICEF Bangladesh estimated that 43,000 people die each year from arsenic-related illnesses throughout the country. Another study analyzed mortality data over a 10 year period among 11,000 people. They found that 21 percent of all deaths in that population could be attributed to arsenic exposure above 10 ppb in drinking water. Exposure to arsenic contaminated water has also been associated with impaired

\textsuperscript{10} FAO. UNICEF, WHO and WSP, Towards an Arsenic Safe Environment in Bangladesh (22 March 2010) at 30.

\textsuperscript{11} The World Bank, Mitigation of Arsenic Contamination in Drinking Water Supplies of Bangladesh – the Case of Chapai Nawabganj (October 2010), at 3.
cognitive development in children, as well as stillbirths, premature births, low birth weight, neonatal mortality and infant mortality, where expecting mothers are exposed to arsenic-contaminated water during their pregnancy.

Moreover, studies have shown that the impacts of arsenic exposure tend to be worse among people with a lower socio-economic status. Studies indicate that an overwhelming majority of arsenicosis patients – approximately 70 per cent – belong to the low-income group. A number of factors appear to increase the vulnerability of the poor to arsenicosis, such as poor nutrition and increased water consumption as manual laborers. Malnourished people are reportedly twice as likely to develop arsenicosis as well-nourished people. The poor are also less likely to be well-informed about arsenic and less able to switch to alternative sources of water even if they become aware of the risks. Wells are often privately owned and alternative water points provided by the Government may not exist in the areas where they live. Arsenicosis causes disproportionately discriminatory consequences on the poor. They may lose sources of income because their conditions and the loss of employment, coupled with increased expenditures for medical treatment, often exacerbate their existing situation of poverty. Those suffering from arsenicosis, particularly women and children, are often ostracized by the communities and abandoned by their own families, based on the common misperception that arsenicosis is contagious or caused by “evil spirit”. It is reported that women suffering from visible arsenicosis symptoms are particularly subject to discrimination. They are often kept isolated and socially excluded, face

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14 Shakeel Ahmed Ibne Mahmood and Amal Krishna Halder, The socioeconomic impact of arsenic poisoning in Bangladesh, Vol. 3(3) Journal of Toxicology and Environmental Health Sciences (2011) 65-73, at 68. See also Abul Barkat and Abul Hussam, Provisioning of Arsenic-free Water in Bangladesh: A Human Rights Challenge (Workshop on Engineering, Social Justice and Sustainable Community Development, October 2-3, 2008) (citing a 2008 study conducted in six arsenic-affected villages in Bangladesh, which found that approximately 70 percent of the arsenicosis patients in those villages were poor, while the non-poor represented 29 per cent and the rich 1 per cent).
15 Human Rights Watch, Nepotism and Neglect (2016), at 29.
17 Using the data from the 2004 Bangladesh Demographic and Health Survey, Mahmood and Halder found that the richest quintile is significantly more aware of arsenic (97 per cent) than the poorest quintile (69 per cent), Shakeel Ahmed Ibne Mahmood and Amal Krishna Halder, The socioeconomic impact of arsenic poisoning in Bangladesh, Vol. 3(3) Journal of Toxicology and Environmental Health Sciences (2011) 65-73, at 68.
difficulties in getting married, or may be divorced and abandoned by their husbands and eventually their own families.\textsuperscript{20}

There is no known cure for chronic arsenic poisoning. Avoiding arsenic contaminated water is essential. A focus on improving nutrition (through increased protein and vitamins) can help the body excrete arsenic. Early diagnosis and management of chronic diseases could improve and prolong the lives of people suspected of suffering from chronic arsenic poisoning. Accurate diagnosis of disease and its cause can also help relieve the trauma of illness.

The country’s health system reportedly identifies people suffering from arsenic-related health conditions via readily visible symptoms of skin lesions. The Directorate General of Health Services (DGHS) reports that in 2012 there were 65,910 “arsenic patients” in Bangladesh. These authorities reportedly identify “arsenic patients” only by a particular set of dermatological symptoms. However, The Bangladesh government reportedly does not attempt to measure deaths or serious illnesses caused by arsenic or to keep records of those deaths.

In terms of national health policy, Bangladesh allegedly has no plan to manage the health impacts from arsenic exposure. The country’s strategic plan for surveillance and prevention of non-communicable diseases (2011-2015) mentions arsenic once in an annex listing national policies, noting only that a “national plan [is] to be developed.”

The nation-wide system of village-level health clinics reportedly provides little or sometimes no response to patients suffering arsenic-related health problems. The problem of inadequate health care services for people suffering arsenic-related health conditions has been reported by previous studies. A survey of staff from over 50 upazila (sub-district) health complexes across the country reported that insufficient supplies of medications was widespread, there was generally poor case management of patients, and health complexes had limited capacity to carry out water testing.

(ii) Inadequate Government response and lack of information and consultation with the affected communities

The Department of Public Health Engineering (DPHE) under the Ministry of Local Government, Rural Development and Cooperatives is responsible for planning, designing, and implementing water supply and sanitation services in rural areas.

Unaffordable alternatives put users at risk

Deep tubewells, the best precautionary alternative to shallow wells, reportedly cost about US$850-950 to install. This amount is too expensive for most individual households in rural areas, who must rely on the deep tubewells or other water points installed by the government if they are to avoid the high levels of arsenic found in shallow wells. Arsenic filters also do not provide an effective and sustainable solution for households living in arsenic-affected areas. They reportedly cost in the range of US$38 to US$76 (3,000 to 6,000 taka) and need to be regularly monitored and replaced, which make them unaffordable for most households.\(^2^1\)

**Existing measures exacerbate discriminatory outcomes**

There has reportedly been no comprehensive national screening of existing wells since the World Bank’s BAMWSP ended in 2007. Most DPHE programmes are allegedly skewed towards expanding access to water in rural areas where the rate of contamination is relatively low, rather than implementing mitigation measures in areas with a high level of arsenic contamination. The review conducted by the Department of Public Health Engineering and Japan International Cooperation Agency in 2010 indicated that 420,000 out of approximately 700,000 active water points installed by the Government up to 2009 were located in areas where arsenic contamination was less than 20 percent of water points.\(^2^2\)

With the support of UNICEF, the Government has conducted a mapping of water points installed by the DPHE between 2006 and 2012 and surveyed approximately 125,000 water points under the Nationwide Water Point Mapping Programme (NWMP). Of these 125,000, about 50,000 (40%) were deep tubewells, some 48,000 (38%) were shallow tubewells, and the remainder were ringwells, shallow shrouded tubewells, pond sand filters and rainwater harvesters, as well as a small number of small piped water systems. An NGO analysis of the survey highlighted that:

- Some 5,000 (4%) government water points installed were contaminated with arsenic above the Bangladesh standard of 50 ppb;
- These tested 125,000 water points represent only 85% of all government wells installed post-2006, and a vast number of government wells have reportedly never been tested;
- There is no correlative relationship between the number of water points recently installed and the level of arsenic contamination; and,
- Considerable funds are being spent in areas where the risk of arsenic contamination is relatively low and where water coverage is relatively good.

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\(^2^1\) FAO, UNICEF, WHO and WSP, *Towards an Arsenic Safe Environment in Bangladesh* (22 March 2010) at 33.

The findings appear to indicate that government resources have been spent on building new water points in less affected areas, crowding out resources necessary to provide for arsenic-safe water in highly contaminated areas. Furthermore, the Government does not seem to have any plans or processes in place to rehabilitate contaminated wells. This leaves very few options for those living in highly contaminated areas, but to continue using the contaminated wells in the absence of alternative safe water points or any plans to rehabilitate the contaminated ones.

Lack of information

Many of the people that drink water with elevated levels of arsenic are reportedly unaware of arsenic in their wells. Without concerted and targeted public awareness campaigns, arsenic is an abstract and remote concept for many people, particularly for those with less education, as arsenic has no smell, colour or taste. Other rural villagers may drink water from wells where arsenic contamination has been identified, but may have forgotten, no longer care about those test results, or disregard warnings when alternative uncontaminated sources of water are too far away from their homes. And many reportedly drink water from wells that have never been tested; they may suspect a well is safe—or contaminated. But even if rural villagers are concerned by the possibility of arsenic in their drinking water, they reportedly have no easy access to arsenic testing services to test their water. In theory, if villagers take a water sample to DPHE offices in their local upazila (sub-district) city or town, those offices can test the water for arsenic using field kits. Test kits are reportedly supplied to DPHE offices on a sporadic basis, many test kits are expired, and no one particular DPHE staff person tasked with performing the test. In practice, many villagers reportedly do not even know this option exists.

It is reported that public awareness campaigns to reinforce messages about the health dangers of arsenic have waned and are alarmingly scarce at present. As a result, it appears that the population is not well-informed about arsenic at present and there is still misperception about its impact on health. For instance, in a recent survey of 6,700 households, 70 percent of respondents said they believed that boiling water could cleanse it of arsenic and that by eating or sleeping with someone who has arsenicosis a person could become infected.

Lack of participation and transparency in allocation of government water points

According to Bangladesh’s Implementation Plan for Arsenic Mitigation (2004), locations for new safe water sources should be determined by Arsenic Mitigation Committees at the upazila (sub-district), union, and ward (village) levels. The ward (village) committee should decide the exact location of each water point.

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23 Human Rights Watch, Nepotism and Neglect (2016), at 34.
24 Arsenic Policy Support Unit, Selected papers on the social aspects of arsenic and arsenic mitigation in Bangladesh (2006), at 17.
within the ward, overseen by the union and upazila (sub-district) committees. More recent DPHE projects have given the responsibility for locating new safe water sources to water and sanitation (WATSAN) committees at the upazila (sub-district), union, and ward (village) level. In 2005, the Government committed to prioritizing the poor communities in allocating new water points, having adopted a “Pro-poor Strategy for Water and Sanitation Sector in Bangladesh”. However, it is reported that these committees are, in fact, often non-functional and the allocation processes are undermined by political interferences. The allocation process for new water points under Bangladesh’s Special Rural Water Supply Project (SRWSP) (2010-2015) was reportedly determined in a memo drawn up in November 2011 following a meeting of Local Government Department officials. The memo provides that the sources of water should be installed at community level instead of individual level, and that “importance should certainly be given to ensure that the very poor communities get access to clean water”. However the memo also directs that “50 percent of the sites for allocation should be finalized after discussion with the relevant Member of Parliament of that area.” In addition to members of parliament, upazila chairmen have also repeatedly influenced the allocation of government water points, and in some cases such government officials have apparently reserved all rights to allocate water points in a given district. This has allegedly resulted in the discriminatory allocation of safe water points on the basis of political connection and favoritism at an individual level, rather than on the actual need of the poor communities for safe drinking water.

While we do not wish to prejudge the accuracy of these allegations, we are deeply concerned about the unprecedented scale of arsenic contamination in Bangladesh and the alleged failure in taking systematic and comprehensive measures to mitigate and prevent contamination for more than two decades. This has serious implications on a range of human rights of the affected population, including, inter alia, the rights to non-discrimination and equality, life, health, water and access to information. We express serious concern that the well-known origin and impacts of this public health crisis have made victims of potentially millions of lives over several decades. In spite of the reported plan for arsenic to be the subject of a national health agenda in coming years, we are concerned at the apparent lack of adequate action on the part of public authorities to properly diagnose and treat arsenic patients, and efficiently prevent the arsenic poisoning. Further, water quality monitoring and testing is not widely available and, where it is, a dangerously high level of arsenic concentration at 50 ppb, as opposed to the internationally accepted standard of 10 ppb, is taken as a reference, potentially leaving millions at the risk of arsenicosis. Additionally, we express our concern regarding the accountability of decision makers and the lack of meaningful participation by the population regarding the allocation of safe drinking water points. Furthermore, we express concern that the affected individuals have not been provided with effective remedies for the infringement of their rights.

In connection with the above alleged facts and concerns, please refer to the Annex on Reference to international human rights law attached to this letter which cites international human rights instruments and standards relevant to these allegations.
It is our responsibility, under the mandates provided to us by the Human Rights Council, to seek to clarify all cases brought to our attention. We would therefore be grateful for your observations on the following matters:

1. Please provide any additional information and/or comment(s) you may have on the above-mentioned allegations.

2. Please provide information on the ways in which monitoring and mitigation of arsenic contamination is incorporated into national, regional or local health plans and policies.

3. Please provide the rationale behind and justifications for the application of the standard of 50 ppb of arsenic as opposed to the World Health Organization guideline of 10 ppb.

4. Please provide information on all institutions responsible for mitigating arsenic contamination, including comments on the alleged dissolution or decreased activity of previously formed institutions.

5. Please provide information on the measures used to monitor and survey water quality in rural areas of Bangladesh, in particular in areas already identified as possessing high levels of arsenic concentration in well water.

6. Please provide information as to whether the Government of Bangladesh plans to rehabilitate tubewells that have been identified as contaminated with arsenic. If so, please provide details of such plan.

7. Please describe how the “Pro-Poor Strategy for Water and Sanitation Sector in Bangladesh” has been implemented to date. Please provide examples, if any, of how the allocation of new water points has been determined in line with this Strategy.

8. Long-term exposure to arsenic produces enormous health impacts far beyond skin lesions: in what ways does your Excellency’s government properly take count of serious illnesses or deaths caused by arsenic?

9. Please explain the measures taken by your Government to provide medical assessment and treatment to the exposed population, especially children, and the steps foreseen to fulfill their right to health.

10. Please describe how the Government plans to ensure that affected population and families of the victims receive an effective remedy.

11. Please provide information on the measures used to ensure access to information and the meaningful participation of, and consultations with, the local populations in the decision-making processes pertaining to their access to water and sanitation services.
12. Please provide precise information on the measures taken to effectively disseminate knowledge about the risks of arsenic contamination, particularly among the rural communities likely to be at risk of arsenic contamination.

We would appreciate receiving a response within 60 days.

We intend to publicly express our concerns in the near future as, in our view, the information upon which the press release will be based is sufficiently reliable to indicate a matter warranting immediate attention. We also believe that the wider public should be alerted to the potential implications of the above-mentioned allegations. The press release will indicate that we have been in contact with your Excellency’s Government’s to clarify the issue/s in question.

Your Excellency’s Government’s response will be made available in a report to be presented to the Human Rights Council for its consideration.

Please accept, Excellency, the assurances of our highest consideration.

Dainius Puras  
Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health

Philip Alston  
Special Rapporteur on extreme poverty and human rights

Léo Heller  
Special Rapporteur on the human right to safe drinking water and sanitation
Annex

Reference to international human rights law

In connection with above alleged facts and concerns, we would like to refer your Government to the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights (ICESCR), ratified by Bangladesh on 5 October 1998; in particular article 25 of the UDHR, and article 11 of the ICESCR, which provide that everyone has the right to an adequate standard of living.

The human right to safe water is an essential human right set forth in the ICESCR, the Convention on the Rights of the Child and UN General Assembly resolution 64/292 of 2010. Article 11 of the ICESCR consecrates the right to an adequate standard of living and article 12 of the ICESCR provides for the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. The Committee on Economic, Social and Cultural Rights, in its General Comments 14 and 15, establishes water as an underlying determinant of health and as a human right, derived from the right to an adequate standard of living.

General Comment 14 of the Committee on Economic, Social and Cultural Rights, interprets the right to health, as defined in ICESCR article 12.1, as an inclusive right extending not only to timely and appropriate health care but also to the underlying determinants of health, such as access to safe and potable water and adequate sanitation, amongst others. (GC 14, Para.11). In this connection, States parties have at least the core obligation with respect to the right to health of ensuring access to basic shelter, housing and sanitation, and an adequate supply of safe and potable water: (GC 14, Para.43 (c)) and are required to adopt measures against environmental and occupational health hazards and against any other threat as demonstrated by epidemiological data. For this purpose States should formulate and implement national policies aimed at reducing and eliminating pollution of air, water and soil. (GC 14, Para.36)

The Convention on the Rights of the Child (CRC), ratified by Bangladesh in 1990, further obliges the State to pursue full implementation of the right of children to the enjoyment of the highest attainable standard of physical and mental health. Article 24 (2) of the CRC specifically provides for a State obligation “to combat disease and malnutrition, including... through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution”.

We also wish to draw the attention of your Excellency’s Government’s obligations under the International Covenant on Civil and Political Rights (ICCPR), ratified by Bangladesh on 6 September 2000. We wish to recall article 6.1 which guarantees the right to life, to which the rights to health and to safe drinking water and sanitation are inextricably related.

Finally, we recall the right of victims of human rights violations to an effective remedy, guaranteed by article 2 of the ICCPR. Access to effective remedies for violations of human rights are cornerstones of human rights law and meaningful
consultations with those affected is a crucial ingredient in fulfilling this right. Consultations should ensure that all affected community members are informed and updated regularly regarding the situation, positive actions being taken by authorities, and avenues for redress.