

British scientists 'failed to check for arsenic risk'

By Steve Connor and Fred Pearce

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British scientists failed to detect dangerous levels of arsenic in the supply of drinking water implicated in the biggest mass poisoning in history.

Two studies of groundwater quality in Bangladesh carried out by British hydrologists failed to monitor natural arsenic levels even though the testing was suggested in voluntary guidelines drawn up by the World Health Organisation.

The British Geological Survey (BGS), the UK's most prestigious hydrology centre, carried out the studies on behalf of the Bangladeshi government in the mid-1980s and early-1990s, more than six years before arsenic was shown to be the cause of the mystery illnesses affecting millions of people.

John McArthur, the professor of geochemistry at University College London, said that if the BGS scientists had followed the WHO guidelines, much of the suffering and many of the deaths might have been avoided.

"If they had tested for arsenic they would have been able to press the panic button. They would have been believed and the world would have known about it long before it did," Professor McArthur said.

"If they had looked for arsenic they could have found it - there is no question of that - and remedial action could have happened five or eight years before it did."

Millions of Bangladeshis are suffering from arsenic poisoning as a result of drinking contaminated water drawn from some of the 10 million new wells sunk over the past 25 years as part of an international development programme aimed at providing clean drinking water.

Many of the residents of Bangladesh's 68,000 villages suffer from the early stages of poisoning, such as ulcerous skin growths. The final stages are gangrene and cancer and an estimated 20,000 people a year have died in the tragedy.

Professor McArthur is critical of the oversight that resulted in the BGS failing to find arsenic. "They did not find arsenic because they did not look for it, even though there were routine, well-established techniques for doing so," he said. "They should have analysed for all the trace elements in the WHO guidelines - and that included arsenic."

Denis Peach, the manager of groundwater systems and water quality at the BGS, accepts that arsenic was one of the "many parameters" in the WHO's "Drinking Water Guidelines" in the early-1990s.

"Nevertheless, it was and remains common practice not to measure all the determinands [sic] on the list ... for reasons of cost and/or availability of facilities," Dr Peach wrote in a statement. "Some judgement always needs to be made commensurate with the scale of the resources available and the perceived - at the time - likelihood of a problem. In retrospect, we - and others - made a mistake."

The BGS said that there was no reason why it should have tested for arsenic given that the scale of the problem did not emerge until the middle of 1997 onwards. Arsenic was not routinely measured by most water-quality labs because it was not widely thought to be a problem in groundwater, other than in mining regions, it said.

However, Professor McArthur said there was no excuse for the BGS not to know about the WHO's guidelines on arsenic.

"If one really wanted to be charitable to the BGS, you'd excuse them for not finding it the first time, but failing to look a second time appears to be inexcusable."

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