

Arsenic contamination of groundwater in Bangladesh

Chronic poisoning of populations by arsenic in ground water has led to the biggest environmental health crisis ever in Bangladesh. This paper presents an overview of the problem. The origin and distribution of arsenic, current theories on its mobilization and transport in the groundwater environment, and future trends are addressed. Secondary data from reports shows that groundwater is the source of potable water for at least 95% of the population. One sample survey conducted in 41 districts shows that 50% of the wells tested have arsenic levels higher than 0.01 mg/l (WHO) guideline). Its origin in ground water is attributed to geological sources, and field evidence is consistent with the oxyhydroxide reduction theory. Health impacts on exposed populations and the social dimension of the problem particularly with respect to women and children is critical. Skin, hair and nails accumulate arsenic and in the first stages of exposure, affected persons suffer from skin disorders and are sometimes rejected from family circles. Excessive exposure has led to deaths. In one small study the prevalence rate, on the basis of visible symptoms, was 8 in 100 persons, Implications for agricultural, and irrigation policy are still insufficiently analyzed. Implications for water supply policy are known to be critical. Awareness has to be created in a population, which is mostly illiterate, and contaminated sources have to be treated or alternative sources provided. The relevance of this topic to Sri Lankan water sector professionals lies in its being a current international issue on which we must be informed.