

Abstract

People living in almost fifty percent of the districts in West Bengal are exposed to arsenic contaminated water. This paper seeks to estimate the economic costs imposed by arsenic-related health problems. We use data from a primary survey of 473 households carried out in the districts of North 24 Parganas and Midnapore. We take into account household actions to either decrease the exposure of family members to unsafe water or to alleviate the health effects of consuming arsenic-contaminated water. This allows us to assess the benefits of arsenic-safe water by estimating a three equation system that includes averting actions, medical expenditures and a sickness function. We find that by reducing arsenic concentration to the safe limit of 50mg/l, a representative household will benefit by Rs. 297 (\$7) per month. The current cost of supplying filtered piped water by Kolkata Municipal Corporation to households is Rs. 127 (\$3) per month per household. Thus, investing in safe drinking water is economically feasible and households are willing to pay for such investments if made aware of effective gain in welfare. Poor households, who make-up the highest proportion of arsenic-affected households and incur the largest number of sick days, will be major beneficiaries of such investment.

Key words: Arsenic, cost of illness approach, health production function, environment and health, economic cost of arsenic contamination.