Clear Water is not Always Clean: Challenges of Sustainable Access to Clean & Safe Water

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Clean and safe drinking water is a basic necessity for good health and survival of human beings. The eastern and north-eastern region of India, particularly states of Bihar, West Bengal and Assam are facing tremendous challenge in ensuring access to safe and clean water to the people. The region are worse affected by fluoride, arsenic and iron contamination. There are various challenges to the access of safe and clean water to people.

First challenge is the mitigation process and providing technological solution to reduce the exposure to the contaminated water. There has to be an appropriate technology which is in amalgamation with indigenous techniques and community knowledge. Second challenge is the operation and maintenance of the arsenic water treatment plants. In case of Bihar, the community water treatment systems has been installed by the government of Bihar. However due to poor maintenance and lack of repair these treatment units are not functioning. It can be resolved by giving the ownership of these plants to the community. Third challenge is the attitudes and behavior of people towards water. Millions of people are exposed to arsenic through daily water intake, food chain and dietary sources. Hence, the arsenic mitigation needs to focus on 'dietary' and 'nutritional' components. Also the biggest challenge is to make people aware about 'clean and safe water'. People's notion about clear water as clean water is erroneous. This can be achieved by creating awareness and dissemination of information. Next challenge is the health and social impact of arsenicosis. Due to lack of knowledge the skin manifestations in arsenicosis patients often become the reason for their exclusion.

There has to be an integrated approach for sustainable access to clean and safe water supply. It requires understanding of the social, economic and ecological dimensions of water resource management. There has to be a convergence of all the different stakeholders and knowledge

sharing for the larger benefit of the society. There is a need for more research on social and economic aspects of arsenic and arsenic mitigation.