A Comprehensive Study on the Stabilisation of Arsenic-Laden Sludge from Arsenic Filters

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groundwater in different parts of India. The paper goes on to present standards regarding Arsenic in drinking water and then proceeds to give a state-wise status of Arsenic contamination. Adverse effects of Arsenic on the health of human beings, accumulation of Arsenic in the food chain and ill-effects of using Arsenic-laden water for irrigation are elaborated upon in the paper. The paper proceeds to explore technological options to deliver Arsenic-free water by various ways and means. Providing medical relief to affected people is also included. Methods for safe disposal Arsenic-laden sludge from Arsenic filters and various issues related to the same are also a key aspects of the paper.

Introduction

Groundwater plays a vital role in India to meet water demands of various sectoral uses. About 80% of rural domestic needs and 50% of urban and industrial needs and about 65% of irrigation water requirements are met by groundwater. groundwater quality deterioration from the contaminants of geogenic origin, in which Arsenic is the one, in many States, mainly in the Ganga-Brahmaputra-Barak fluvial plains, has emerged as a major concern to this important resource. The groundwater potential of the Ganges and Brahmaputra Barak basin in India has been assessed 171 BCM (Billion Cubic Metre) and 26 BCM, respectively, which is about 45.7% of the total annual replenishable groundwater resources of India (CGWB, 2011). Increased number of