

Geologic Impacts on Arsenic Levels in the Groundwater of Bangladesh

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Abstract

Arsenic poisoning is the ingestion or inhalation of arsenic and can cause a multitude of health problems such as skin lesions, cancer, etc. Arsenic can naturally be found in groundwater because of some of the following reasons. One of the reasons is because of weathering from rocks such as pegmatites, granites, and other types of metamorphic rocks. These sediments then make their way into aquifers which are then accessed by tube wells. The oxford dictionary defines a tube well as a type of water well in which a long 100–200 millimeters wide stainless steel tube or pipe is bored into an underground aquifer. This situation is present in Bangladesh. Over 35 to 75 million people in Bangladesh are at risk of drinking water that contains arsenic. Two theories are present for why and how the arsenic is present. One is that the arsenic came from sediment that was weathered from the Himalayas. The second theory states that the over pumping of water led to the mobilization of arsenic into the aquifers. There are many treatment options available such as collecting rainwater, arsenic filters and purifying surface water but these options require money which is a scarce resource in a third world country such as Bangladesh.