

Geowissenschaftliches Kolloquium

Groundwater contamination by arsenic in Nepal - causes and mitigation

Donnerstag, 12. Juli 2018 - 16.15 Uhr

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The lowlands of Nepal are severely affected by the arsenic crisis causing serious health issues to inhabitants using As contaminated groundwater as drinking water. A geogenic source of As is likely and its elevated natural concentrations in groundwaters are caused due to the weathering of the Himalayan orogenic belt. Arsenic can be easily solubilized in groundwaters depending on pH, redox conditions, temperature, etc. Even though As is mainly incorporated in iron-hydroxides, a substantial portion is retained by clay minerals. Nowadays, iron-assisted bio-sand filters are commonly used to remove arsenic from well water.



Dr. Barbara Müller is a freelance scientist from Zürich working in cooperation with Eawag Dübendorf and the universities of Basel and Bern. She received her PhD from ETH Zürich and continued her research at various institutions in Canada, Bolivia, Sweden and Nepal. Her main interest are the geochemistry of natural waters, analytical geochemistry and interaction between bacteria and clay minerals.



Layout: FUB Geopai Vanessa Skiba, 20180611

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