
## Paper Presentation at 1st International Conference on Advances in Water Treatment and Management Organised at PDEU, Gujarat

**Pandit Deendayal Energy University (PDEU), Gandhinagar, Gujarat organised the 1st International Conference on 'Advances in Water Treatment and Management' (ICAWTM-22)** in association with 'Gujarat Council of Science and Technology' on 25 and 26 March, 2022. This conference was designed to bring together an interdisciplinary team of researchers to share their expertise and research experience on recent trends in water treatment and management. The idea was to bring together like-minded agencies and stakeholders including research organisations, universities, NGOs, and SMEs from India and abroad to share their expertise in low-cost water treatment, wastewater treatment, recycle, and reuse. The conference included invited lectures by eminent resource persons from reputed universities and institutions, poster presentations, paper presentations, and interactive sessions. The faculties from different colleges, research scholars, students, and scientists joined this opportunity to demonstrate their own works and get valuable suggestions from experts. Gunjan Som and Dr Yogendra Singh Solanki from Development Alternatives participated in the conference, wherein they presented their paper entitled "Arsenic occurrences, health impacts and arsenic removal technologies for drinking water: A Comprehensive Review". The paper highlighted on the current groundwater arsenic contamination, which poses a health risk to people worldwide. The occurrence of arsenic in groundwater is due to favorable geological and anthropogenic conditions. The World Health Organization and Bureau of Indian Standards have set an upper limit for arsenic in drinking water to be 10 and 50 µg/L, respectively. Excess arsenic in drinking water is liable to skin cancer, nervous system disorder, cardiovascular diseases, chronic diseases, and acute diseases. Furthermore, a comprehensive scenario for high arsenic levels in groundwater in countries such as India, Nepal, Bangladesh, Germany, Pakistan, Japan, Cambodia, Australia, the United States of America, Peru, and China has been outlined. This problem is mainly acute in Southeast Asia, particularly in India, Bangladesh, and China. In India, out of 29 states, 10 states are affected with higher arsenic contamination in groundwater, in which Bihar and West Bengal have highly affected arsenic groundwater. The presentation also

discussed about various technologies to remove arsenic from water, including reverse osmosis, nanofiltration, adsorption, ion exchange, precipitation/coagulation, and their removal mechanisms. Furthermore, it reveals that different techniques have different levels of arsenic removal capacity. The DA's initiative of 'Jal TARA Community Arsenic Filter' was also proposed. Currently, it is functional in the Khagaria district of Bihar and is leading to newer frontiers for arsenic removal approaches. Overall, the paper was successfully presented with positive feedbacks and appreciation from the panel of experts.