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Arsenic Contamination in Underground Water in Myanmar

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Myanmar is located in South East Asia region and arsenic contamination in ground water is naturally occurring (Geogenic related arsenic). Arsenic contamination of ground water in Myanmar first came to attention in 2000 but full magnitude and scale of the problem is still unknown. In Myanmar, the permissible level of arsenic in drinking water is 50µg/L. Baseline data of Arsenic contamination in ground water was collected by government and non-governmental organizations through Arsenic Mitigation projects since 2000. Chronic arsenic poisoning – ARSENICOSIS is a chronic health condition arising from prolonged exposure of arsenic above a safe dose. Active case detection of Arsenicosis study was conducted from 2002 to 2006 and 7 Arsenicosis cases were found. From 2015 to 2018, Arsenic mitigation project was done in 7 villages of Thabaung Township by Department of Medical Research in collaboration with University of Miyazaki, Japan. Baseline study was carried out and only 21% (190/904) households had knowledge about arsenic. Among the 183 tested tube wells, 67.2% had Arsenic content above Myanmar National Standard of 50 ppb (0.05 mg/L). In 2016 and 2017, on general medical examination and examination of arsenicosis related dermatological and neurological signs, 20.9% (43/205) and 20.4% (28/137) of hair samples were found to have higher than permissible level (1 ppm) respectively. Awareness program on Arsenic was carried out at schools, houses and Township health department of the study area. Evaluation survey done during February and March 2018 revealed that 78% (573/735) households had knowledge about arsenic. Safe water supply system (Gravel Sand Filter) has been established in two villages of the study area. This GSF system can provide safe drinking water for people residing in arsenic contaminated areas in Myanmar.

Biography:

Dr. Khin Phyu Phyu is a Director of National Poison Control Center (NPCC), Department of Medical Research, Ministry of Health and Sports since 2014, dealt with environmental health challenges of Myanmar. Quality of research and capacity building are being upgraded. Collaboration with Japan International Cooperation Agency (JICA) assessing arsenic levels in rural water wells. She was experienced for more than 14 years in teaching and 18 years in the research fields. She has more than 21 publications, 4 international posters, 7 international speakers and 8 international trainings and workshops. She has received 12 awards for research papers and posters.