How NTU is helping schools in Nepal to battle arsenic contamination

Cheryl Tan
In Nawalparasi (Nepal)

When Mr Ramprasad Yadap, who lives in rural Nepal, started developing skin lesions on his body some 17 years ago, he did not think much of it. He thought the redness and tingling were due to mosquito bites. But then, he noticed two distinctive signs of arsenic poisoning – a swollen left foot that would not go down, and a yellow discoloration of his nails. These were a tell-tale sign of arsenic poisoning. Mr Yadap, who is in his sixties, was diagnosed with arsenic poisoning in 2004.

According to Dr Makhan Maharjan from Nanyang Technological University (NTU), who is working with environmental engineers from its Nanyang Environment and Water Research Institute in Singapore, the results of arsenic poisoning are not always obvious at the early stages, but if it is not treated, it may lead to eventual amputation.

Mr Yadap’s case is not unique. In the past, there has been other institutions and non-governmental organisations (NGOs) in the region offering help. But the task of getting clean water to everyone is a difficult one. While water filtration systems in Nepal are now a lot cleaner, the price is steep. According to the Ministry of Health and Population, the average cost of a water filter is S$72.50. This is typically made of a filter cartridge that can last up to two years. Still, I worry a lot about their future. I hope clean water for them is here to stay.

Staying in Ramgram village in Nawalparasi district in Nepal’s southern Terai region – a lowland area. DIPENDRO FOO

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Dr Makhan Maharjan, a programme director of non-profit organisation Health and Environment Development, Nepal (Head-Nepal) and a research assistant collecting samples near the Pashupatinath Temple to assess the physical and chemical characteristics, and the microbiological quality of the Bagmati River water.

Left: The Pashupatinath Temple, a Unesco World Heritage site in Kathmandu, on the banks of the highly polluted Bagmati River.

Above: A cremation ceremony taking place at the temple by the water’s edge. The famed river which runs through Kathmandu Valley is revered by Hindus and Buddhists as its water is thought to be holy.

Right: Children at a popular stone water spout in Patan. Such spouts are part of an ancient water distribution system that uses gravity to channel rainwater to residents in Kathmandu Valley.

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