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SUSTAINABLE DEVELOPMENT OF WATER RESOURCES, WATER SUPPLY AND ENVIRONMENTAL SANITATION

The UV tube: A family-shared water disinfection system in rural Sri Lanka

F. Reygadas, United States and Mexico and A. J. Pickering, United States

In August 2005, researchers from UC Berkeley traveled to Sri Lanka to partner with Sarvodaya, a local development organization, on a project to design and test a family-shared version of the UV Tube. The UV Tube is an effective and low-cost ultraviolet water disinfection system developed in the Renewable and Appropriate Energy Laboratory (RAEL) at UC Berkeley specifically for underserved communities. UV Tubes use ultraviolet (UV-C) light emitted from a germicidal bulb to inactivate waterborne bacteria, viruses and protozoa. UV Tubes are designed to be constructed from common, inexpensive materials available in developing countries and the pilot model in Sri Lanka was built using all local resources. At present, Sarvodaya technical officers have installed eleven systems in two rural villages serving 140 families, one preschool and a train station.

A workshop was held to train Sarvodaya Technical Officers to conduct water quality sampling and use the results to make critical decisions about appropriate drinking water treatment measures. The low cost of the UV Tube has inspired the current development of a dissemination model to allow villagers to pay for the system through loans or an installment plan. The model will require support from donor agencies to cover the cost of need assessments, water quality testing, and education programs crucial to sustainability of the project. The long-term goal of the collaboration with Sarvodaya is to develop a large-scale UV Tube program that would allow Sarvodaya to offer the UV Tube as an option to the 15,000 villages it serves.