USAID | SRI LANKA
FROM THE AMERICAN PEOPLE

Pedal Power Provides Access to Clean Water

More than 350 estate workers and their families have benefited from the improved access to a regular clean source of water from the two taps connected to two tanks set up practically in their backyards . . .

"The pump has made our lives so much easier," said Valli Moganum, a young mother who previously spent much of her days fetching water. "Our children aren't getting sick as often since the pump arrived."

Challenge

In some parts of rural Sri Lanka, long walks to fetch water from a well or river are part of the daily routine. Clean water is used sparingly for cooking and drinking and in some places the water used for bathing, washing clothes or pots and pans is contaminated and presents health risks. At the Mahawella Tea and Rubber Plantation in Ratnapura, health authorities have declared the runoff and surface water contaminated; some of the wells were not protected sufficiently to avoid being contaminated as well. Some of the people who live and work for the estate, especially on the higher hill slopes, began to suffer high rates of diarrhea and stomach ailments, diminishing their daily income through incapacitation by illness.

Initiative

Searching for solutions to improve access to clean water at Mahawella, the management came across a simple yet innovative device called the SolarPedalflo. Developed by the U.S. based Moving Water Industries (MWI), the equipment was identified by Energy Management Services (EMS) Sri Lanka, during a USAID-sponsored visit to the Water Environment Federation Annual Exhibition.

USAID was instrumental in promoting a partnership between MWI and EMS, and also provided a technology promotion grant through the Council of State Governments to sponsor an MWI engineer to install and test the SolarPedalflo. Through USAID sponsorship, SolarPedalflo was introduced, providing much-needed clean water to the Mahawella estate community.

The SolarPedalflo is a solar powered water pump with back-up "pedal" power, much like a bicycle, to be used when solar power is not available. The solar panels produce 350 watts of energy, lifting up to 300 gallons of water per hour from a depth of 40-45 meters to elevated storage tanks. The unit comes with an automatic de-chlorinator to destroy viral and bacterial contamination, as well as micron filters that remove impurities. Placed on top of the well, the unit protects it from the contaminated run-off water. It is best suited for areas with high rainfall and cloud cover, or remote areas that do not have pipe-borne water or grid electricity.

Results

A committee has been set up to manage the "affairs of the pump" in an open forum. The estate management has been supportive and works closely with the community to ensure that the operations are carried out successfully. A fee of Rs. 10 per month is collected from the users to meet maintenance costs, a small price to pay for the privilege of a constant supply of accessible, clean water.

USAID/US-AEP assistance allowed Sri Lanka to introduce new technology that not only proved suitable but also helped to develop and implement a community managed investment recovery mechanism that ensures sustainability.