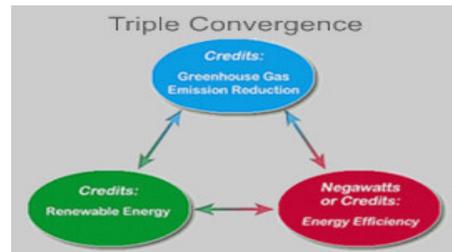




Nuworld Research & Development



Renewable Energy earns **Carbon Credits**, while improving **Energy Efficiency**. **Energy efficiency** improvements *result* in *reduced* load on the default electricity supplier (local electricity **Distribution** company) which translates into less *immediate* need for power generation by the default energy generator (electricity **Generation** company) and earned **Carbon Credits** can be **sold to Canadian** or **International** Carbon trading companies thus financing **Renewable Energy** technologies or projects.

A solar powered water pump with a twist

Part of the daily routine of women (and at times men and children) in Sri Lanka is to spend up to half an hour on one trip to get water from a well or a river. As they can take only what they can physically carry, they have to make this journey several times throughout the day. The water they carry to their homes is used sparingly for cooking and drinking. Water used for bathing, washing clothes or pots and pans would require yet another trip to the water source. If there is another water source closer that can be used for bathing and washing, it is used regardless of how contaminated the water may be. This exposes the people, including small children, to many diseases. Yet life goes on...



Does fetching water have to be a normal part of her routine?



Could you pedal for water instead?

This was the reality for some of the people who live and work in the Mahawella Plantation, Ratnapura. This particular community is on a tea/rubber plantation with hilly terrain. The run-off water and surface water in the area had been declared "contaminated" by the local health official and some of the wells in use were not always well protected from the elements. Cases of diarrhoea and stomach ailments were high and for the men and women of this community who rely on daily wages, illness reduces their productive time. While most of the residents on this estate have access to water closer to their homes, there is one particular division of the estate that faced considerable hardships without a clean water source closer to their homes. This lack of water would become more acute in the dry season (3-4 months of the year). The management and community of the Mahawella estate were looking for a way to ease the pressure. Then came the "SolarPedalflo" to the rescue...



The community maintained SolarPedalflo enclosure at the Mahawella Estate

The SolarPedalflo is a solar powered water pump with a back-up "pedal" power supply for those times when solar power is not available. The pedal apparatus is similar to an exercise machine or bicycle. The solar panels produce 350watts of energy and can be manually adjusted to catch maximum sunlight. The SolarPedalflo can lift up to 300 gallons per hour from a depth of 40 - 45m that can be pumped to elevated storage tanks. In order to produce water of exceptional purity, it comes with an automatic chlorinator to destroy viral and bacterial contamination, as well as

micron filters that remove larger impurities from the water. The SolarPedalflo is placed on top of the well and therefore the well remains sealed from contamination from area run-off. The SolarPedalflo is ideal for areas with high rainfall and cloud cover or areas that are remote and do not have pipe borne water or electricity. The SolarPedalflo is a compact, decentralized water supply and treatment system that can bring convenience and quality closer to the users!

So can a small intervention make a big difference? The SolarPedalflo was not only the right technology for the job, but it was also coupled with the commitment of community and the management of the estate, and that makes for a long-term solution! The community had a need and the estate management was keen to improve the living conditions of their workforce. They worked with the technical support provided by MWI and EMS to set up and manage the system.



This has become a community-managed effort with an elected committee chosen to handle the “affairs of the pump”. The committee is made up of men and women from amongst the beneficiaries and issues are discussed in an open forum. The estate management is supportive of this initiative and they work very closely with the community to ensure that the operations are carried out successfully. The committee members have been trained in the operations and maintenance and they share the tasks of pedaling (if needed), cleaning the filter, and maintaining the system. A fee of Rs. 10 per month is collected from the users so that maintenance costs can be met. The users have not objected to this fee as they say that the convenience is worth it.

Valli Moganum, a young mother, said “*it has made our lives easier, it is so much more convenient*”. She also thought that the children were not getting sick and that the water borne illnesses have reduced.

Prabakaran, who is a member of the committee, says “*The committee is working well and everyone is very supportive as they are happy with the service as this has made our lives easier*”

Now more than 80 families (about 345 users) have better access to a regular clean source of water. There are two tanks and two taps set up. This has allowed the families to have water in their “backyards” thereby reducing the time spent collecting water, allowing them to focus on other priorities.

If interested, **for further information**, please contact:

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