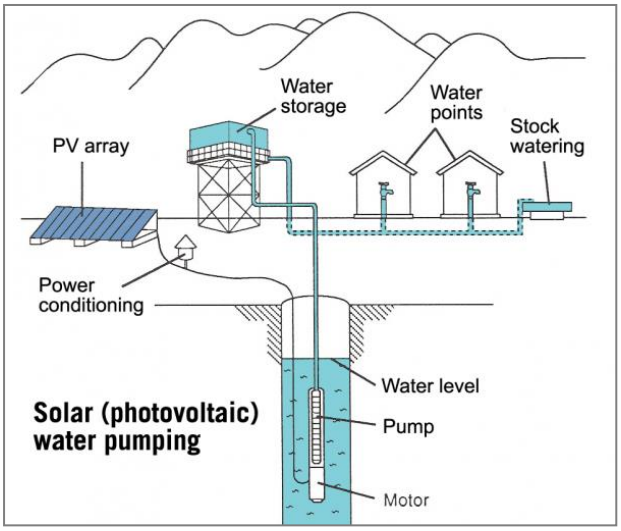
SOLAR-POWERED WATER PUMPING IN KENYA IMPLEMENTED BY PRACTICAL ACTION

by Daysi Mamani Suaquita

Practical Action working with communities in Kenya and using the overabundance of sunshine, developed a solar-powered water pump that can pump up to 30,000 liters of clean water per day.



The solar pump draws water from a 100-metre-deep well, providing families with water and rendering cases of water-related diseases. In drought-affected areas of Turkana in northern Kenya, women and children walk miles to find water, in order to sustain their families and animals.

The solar pump consist of a protected hole that is drilled 100m down into the earth to reach a water source. A solar panel made of photovoltaic modules powers an electric motor, which in turn powers an underground water pump. This pump can draw up to 30,000 liters of clean, fresh water, every day.

All the fresh water is stored in a water tank. The tank is then connected to water pumps and taps around the village by a system of pipes.

Through this system, villagers are then able to access fresh, clean water without having to travel long distances. Because they no longer have to spend hours searching for water, children have the time to go to school and women can devote the time to crops or other productive activities.

Turkana district is ideal for solar, combining favorable year round sunshine, with aquifer potential, demand for water and depth of groundwater all within the comfortable range of the pump. Such conditions are not always present elsewhere. For example where demand is very high or groundwater is deeper, solar-powered water pumps is not a solution.

In any case technology is only part of the solution and the good management of the system is also crucial to ensure an effective service. Based on this, Considerable efforts are made in collaboration with other programs and working closely with the District Water Officers, to develop the capacities of village level

management committees providing long-term technical support to ensure the supply of water effectively and permanently.

In many African countries people are living in drought conditions and they don't have access to clean water. The use of solar-powered water pumps has been spreading in Cameroon, Ghana, Malawi, Mali, Nigeria, Senegal, Gambia, Uganda, Zambia and Zimbabwe.

On the website of Practical Action information on technical characteristics of solar pumping systems and their use is available.

To know more

Practical Action webpage

Practical Action 2015 Annual Report