

(Specific Objective - SO) Improved access to drinking water, in quantity and quality , for 1.000 beneficiaries of the community of the mozambican village called Nalazi.

Technical Justification



Water pump with photovoltaic solar panel , 85 watt

Concept Cost



2 manual Pumps AFRIDEV

Concept Cost

3 manual Pumps AFRIDEV

Concept Cost



1 submersible pump, with diesel generator

Concept Cost

Advantages

Simple Installation	Simple Installation	Simple Installation	Simple Installation
Internal Orings and bushings are resistant to the piston friction.			
Components are resistant to corrosion			
Low maintenance costs			
Solar energy source is inexhaustible and sustainable			
It is not necessary sunny day to be working. It can work with presence of clouds			
it allows to feed and fill 2 contiguous tanks , with no interruptions			
Water is distributed from the tanks (with 20.000 Liters capacity) down to the 4 springs installed in the village			
Time of the beneficiaries is liberated. No need to be pumping manually anymore.			
Optionally, pump can manually operate, (for instance during the nighttime)			
For future interventions , most components can be locally manufactured			

Pump can pump up water from deeper wells compared to the other systems

Disadvantages

Newly concept, may bring some reluctance, caused by few knowledge of facts	Internal Orings and bushings are not resistant to the piston friction.	Internal Orings and bushings are not resistant to the piston friction.	High fuel cost turns the system economically and enviromentally unsustainable.
	Maintenance costs are moderate, but tending to high when no preventive maintenance is done, and thus damaging the pumps in the midterm and turning them inoperative.	Maintenance costs are moderate, but tending to high when no preventive maintenance is done, and thus damaging the pumps in the midterm and turning them inoperative.	Scarcity of fuel in the regio, may lead to long periods of non operation.
	User have topump manually , so most of ist time is dedicated to get water from springs , specially women.	User have topump manually , so most of ist time is dedicated to get water from springs , specially women.	High dependancy on fuel price variations.
	Oportunity costs are extremely high, due to the fact that time used to collect water is not invested in children educations or care of sons , or other productive like agriculture or other domestic tasks.	Oportunity costs are extremely high, due to the fact that time used to collect water is not invested in children educations or care of sons , or other productive like agriculture or other domestic tasks.	