

(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			2 manual Pumps AFRIDEV		3 manual Pumps AFRIDEV		1 submersible pump, with diesel generator	
Concept Cost			Concept Cost		Concept Cost		Concept Cost	
Initial Investment	Drill 1 Well (30 m.)	€ 4.000	Drill 2 Wells (30 m.)	€ 8.000	Drill 3 Wells (30 m.)	€ 12.000	Drill 1 Well (30 m.)	€ 4.000
	1 Water with solar panel	€ 12.000	2 manual Pumps AFRIDEV	€ 5.000	3 manual Pumps AFRIDEV	€ 7.500	1 submersible pump, with diesel generator	€ 4.000
	Installation Cost of pump onto the well	€ 500	Installation Cost of pump onto the well	€ 500	Installation Cost of pump onto the well	€ 750	Installation Cost of pump onto the well	€ 500
Operative Costs	Yearly maintenance cost	€ 400	Yearly maintenance cost	€ 1.200	Yearly maintenance cost	€ 1.800	Yearly maintenance cost	€ 400
							20 liter per day of diesel	€ 9.125
							1 Liter = 1,25 €	
		cumulative		cumulative		cumulative		cumulative
Year 01	€ 4.000 € 12.000 € 500	€ 16.500	€ 8.000 € 5.000 € 500	€ 13.500	€ 12.000 € 7.500 € 750	€ 20.250	€ 4.000 € 4.000 € 500 € 4.563	€ 13.063
Year 02	€ 400	€ 16.900	€ 1.200	€ 14.700	€ 1.800	€ 22.050	€ 400 € 9.125	€ 22.588
Year 03	€ 400	€ 17.300	€ 1.200	€ 15.900	€ 1.800	€ 23.850	€ 400 € 9.125	€ 32.113
Year 04	€ 400	€ 17.700	€ 1.200	€ 17.100	€ 1.800	€ 25.650	€ 400 € 9.125	€ 41.638
Year 05	€ 400	€ 18.100	€ 1.200	€ 18.300	€ 1.800	€ 27.450	€ 400 € 9.125	€ 51.163

Estimated minimum demand for the 1.000 Direct Beneficiaries = 1.000 x 15 L. / person / day = 15.000 Liter / day

<p>at 30 meter deep, with flow rate = 20 Liter / min = 1200 Liter / h</p> <p>15000</p> <p>12,5 hour per day with sunlight, considered as effective</p> <p>15.000 Liter/ day</p> <p>Demand is satisfied</p>	<p>at 25 meter deep, with flow rate = 14 Liter / min or 840 Liter / Hour x 2 pumps = at 8 effective operative per pump = 13.440 Liter / Hour</p> <p>13440</p> <p>Se consideran 2 bombas manuales funcionando 8 horas cada una.</p> <p>13.440 Liter/ day</p> <p>Demand of 15.000 Liter / day</p>	<p>a 25 meter deep, with flow rate = 14 Liter / min or 840 Liter / Hour x 3 pumps at 8 hours effective operative per pump = 13.440 Liter / Hour</p> <p>20160</p> <p>Se consideran 3 bombas manuales funcionando 8 horas cada una.</p> <p>20.160 Liter/ day</p> <p>Demand is satisfied</p>	<p>at 30 meter deep, with flow rate = 20 Liter / min = 1200 Liter / h</p> <p>18000</p> <p>15 hours per day, considered as effective</p> <p>18.000 Liter/ day</p> <p>Demand is satisfied</p>
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