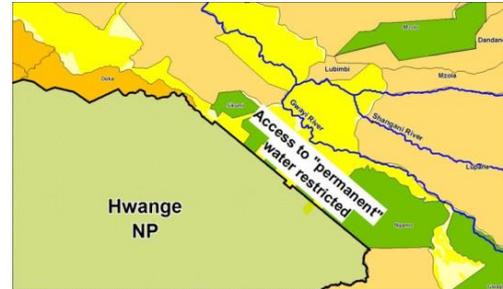


Attachment
Conservation and Hwange H2O Project

Hwange National Park is located on the northwestern corner of Zimbabwe in one of the driest parts of the country. The area receives just above 600mm of rainfall annually and in addition to this the bulk of the park has no perennial natural water bodies like rivers or dams. The remaining water for wildlife is provided by natural ephemeral pans in the wet and early dry season and around 60 pans supplemented by boreholes and pumps in the late dry season.



Access to permanent water has been restricted by the artificial north-eastern boundary of Hwange National Park. Along this boundary a railway line was constructed long before the park was designated in 1928. Roads, farmland and associated development in the area added to the near-total restriction of animal movement to permanent rivers.

Solar-powered Water Pumps

For many years diesel engines were used to power simple submersible pumps in boreholes that extend 60-80 metres below ground level. This low-tech system required that many pumps ran continuously in order to supply sufficient dry season water for the burgeoning elephant population. Solar powered pumps are obviously the best modern alternative to diesel pumps. Installation costs are higher but running costs are very low while pollution is reduced as there is less need for diesel powered pumps. Solar powered pumps will also alleviate the impacts of uneven rainfall distribution. Water can be regularly supplied but not in unlimited quantity – thus hopefully both spreading out elephants and lowering the pressure on underground reserves.

A number of boreholes were originally sited on the fossil drainage lines of the Kennedy/Ngamo complex. The western-most of these can be termed the “front line” pans which elephants, buffalo and other large water-dependent species encounter in their dry season movement northwards. If water supplementation in our area could be revived in some or all of these, which are situated not too far outside the concession, the pressure on water which we provide inside the concession may be reduced. It is our goal to rehabilitate these front line pans and equip them with Solar-Powered Pumps. Masumamalisa Pan is one of these front line pans and is an integral part of our H2O Hwange campaign and with this generous donation we would like to immediately begin the installation of the solar power system to help power the borehole and provide an adequate water source for wildlife in a sustainable and conservation conscious manner. Additionally, we will equip Chris’s Pan with a generator to complement the solar powered unit.

Budget

Item	Cost (\$)
Masumamalisa Borehole Drilling	6,500
Masumamalisa Solar Unit	6,440
Generators (KDE6500T, 5.5kva, 19.6amps):	
- Chris’s Pan	1,250
- Masumamalisa Pan	1,250
6 months pumping costs at Ray’s, Masumamalisa, and Chris’s Pans (Transport – fuel and vehicles)	11,196
TOTAL	26,636.00