Technology Fact Sheet for Mitigation

Technology	Description	Benefits	Challenges
PV for productive use [i]	A solar water pump system is essentially an electrical pump system in which the electricity is provided by one or several Photovoltaic (PV) panels. A typical solar powered pumping system consists of a solar panel array that powers an electric motor, which in turn powers a bore or surface pump. Depending on the size of the solar pump capital cost range from US$20,000 to US$80,000 per unit.	Solar water pumps can supply water to locations which are beyond the reach of power lines. Commonly, such places rely on human or animal power or on diesel engines for their water supply . Solar water pumps can replace the current pump systems and result in both socio-economic benefits as well as climate related benefits. The water supplied by the solar water pump can be used to irrigate crops, water livestock or provide potable drinking water	The high initial capital costs of the PV array is the major barrier to high penetration rates of the use of solar water pumps and hence requires an innovative financing mechanism to support farmers in rural areas with credit loans to enable them purchase the solar pumps.

[i] **This fact sheet has been extracted from TNA Report – Technology Needs Assessment and Technology Action Plans For Climate Change Mitigation– Zambia. You can access the complete report from the TNA project website http://tech-action.org/**