

# PROJECT PROPOSAL

*To Fairhandeln*

**SUPPORT TOWARDS ACQUISITION OF  
IMPROVED SMALLHOLDER IRRIGATION SOLAR  
POWERED EQUIPMENT.**

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*Prepared and Submitted  
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## **1. Introduction**

During the past 5 to 6 years Southern Zambia has experienced a definite shift in the weather pattern such that the commencement and end of rain season is no longer predictable. Over the same period Zambians living in the Southern part of the country are having to face a critical water supply situation for both agriculture and domestic use. To a large extent, people have been dependent on rivers and streams whose water supply source is the rain. Changes in the rainfall pattern has in turn affected the water holding capacity of most of the streams. However for those by the main rivers such as the Kafue and Zambezi rivers have the potential to continue with their agriculture activities if only appropriate technology was to be used for them to harness the waters of the rivers. Hence this proposal.

## **2. Project Description**

### **2.1. Origin and Justification**

As the water supply challenges have clearly manifested their ugly face, the Diocesan Development department has had to come up with ideas to help communities sustain their lives and continue to live dignified lives. When we thought watering vegetables with a bucket was cumbersome, we moved to the use of a treadle pump see Annex 1. However new challenges re-surface, this time is the reversion of the rivers from where the gardens are. This means people now have to shift their homes.

The Diocesan Development department is known for its affinity to solar energy. As such has decided to embark on a pilot intervention using solar for irrigation.

### **2.2. Project Location and Current Activities**

The intervention will target 15 (families) women, 9 in Cheeba Village of Chikankata District in Southern Zambia and 6 (families) women in Muluwe Village of Chirundu District. Monze Diocese Development department has been working with these 2 Villages since 2010 and due the receptivity of the community members, the two villages have proved to be a model for many communities when it comes to implementation of rural development projects supported by the Diocesan Development Department. The villages have been Champions in using a treadle pump to an extent that during the year 2012 they contributed significantly to food security of the surrounding villages in their respective Districts.

Both villages are located on the banks of the Kafue River whose waters have in the recent past receded making it difficult for the families to effectively use a treadle pump for irrigation. It is envisaged that using a solar powered pump, one shared between 3 families in Cheeba and one between two families in Muluwe, for demonstration purposes during the year 2018 to 2019 may prove to be the hope for future in food production for families living along these rivers.

It is also in these areas that poor rainfall is an annually a normal occurrence. Therefore apart from being an intervention intended to increase food it is a strategy for resilience towards climate change.

### 2.3. **Main Objective –**

*To contribute towards strengthening food security and resilience to climate change among targeted communities in Chikankata and Chirundu Districts of Southern Zambia.*

While many small scale farmers, in Monze Diocese, have increased knowledge in enhancing household food security and measures one can take to ward off effects of climate change, there has been serious limitations in affordable appropriate technology that ensure their success in these two areas of livelihood. The targeted areas have the natural benefit of having at least 9 hours sunlight. In this way being fortunate as beneficiaries of naturally guaranteed solar energy. If successfully utilised solar driven pumps will be a long term solution for harnessing water for smallholder irrigation.

### 2.4. **Specific objectives**

*By end of 2018, to have supported 15 families (small scale Farmers) with solar driven water pumps for small scale irrigation.*

### 2.5. **Indicators towards the realisation of the specific objective**

- 2.5.1. 5 units of complete solar pumps supplied for sharing among 15 households of Cheeba (9) and Muluwe (6) villages.
- 2.5.2. 15 targeted households irrigating their vegetables and other crops of choice using the supplied solar pumps.

### 2.6. **Activities to be undertaken**

#### 2.6.1. *Purchasing and Distribution of the Irrigation Solar Units to te targeted households.*

- The events leading to the distribution will involve conducting a community meeting for the selection of the would be model households.
- The selected households will have to sign an agreement committing them to care for the solar irrigation units as well as contributing to a fund for purchasing more solar units for other members in the Village.

#### 2.6.2. *Hold a one day demonstration on the utilisation and maintenance of the irrigation solar units.*

While the identified irrigation solar units have proven to be user friendly, it cannot be taken for granted that the beneficiaries have the know how to use and maintain them. Hence the need for the training.

#### 2.6.3. *Monthly visits by the field officer to assess the utilisation of the equipment.*

Monze Diocese Development Department is embarking on the use of this devise for the first time. Therefore there will be need for close follow through to learn of any challenges that may go with this device.

### 3. Budgetary Requirements

#### 3.1. Breakdown of costs

Code	Activity Detail	Unit	Unit cost ZMW	Total Units	Total Cost ZMW
2.6.1	a. Purchasing of the Irrigation Solar Units	each	7,366.00	5	36,830.00
	b. Selection of households and Distribution of the Irrigation Solar Units to the selected households.	each	4,070.00	1	4,070.00
2.6.2	Hold a one day demonstration on the utilisation and maintenance of the irrigation solar units.	inst.	2,080.00	2	4,160.00
2.6.3.	Monthly visits by the field officer to assess the utilisation of the equipment.	Visit	140.00	12	1,680.00
<b>Total Project Cost</b>					<b>46,740.00</b>

#### 3.2. Summary – Financing

Source of Finances		ZMW	Euro Equiv.
1	Local Contribution	2,141.50	164.73
2	Others	1,010.00	77.69
3	Requested of Fairhandeln	43,588.50	3,352.96
<b>Total Project Cost</b>		<b>46,740.00</b>	<b>3,595.38</b>

Currency exchange rate	1 Euro = 13 ZMW	20/10/2018
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#### Note:

The projects requirements are as shown above in Zambian Kwacha with a **Euro equivalent of 3,595.38**. Local contribution and others is **Euro equivalent 242.42** Requested of Fairhandeln in Euro equivalent is **3,352.96**

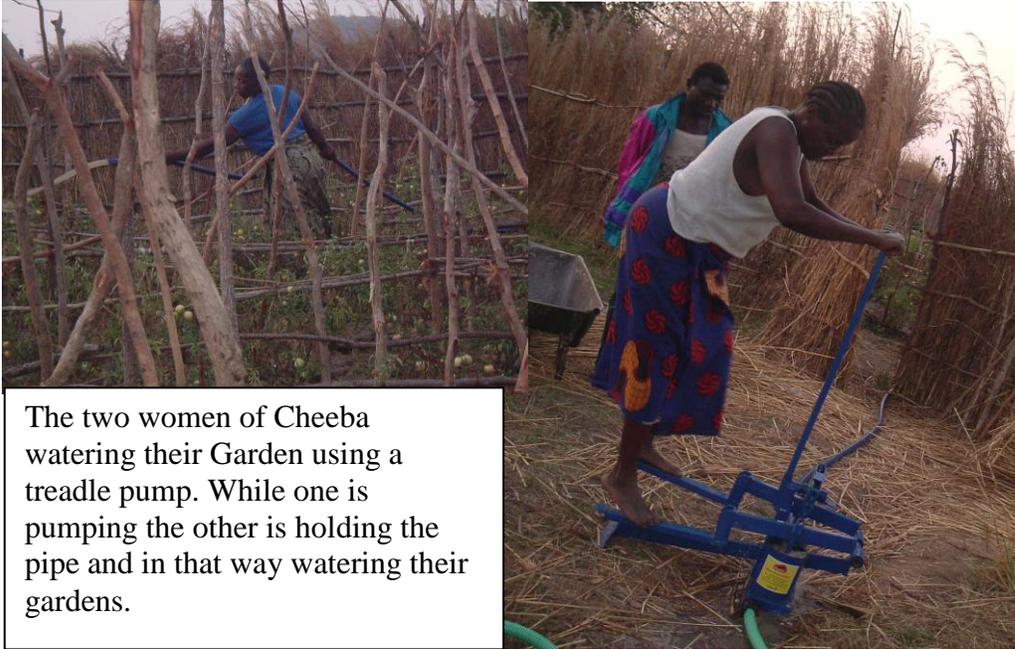
### 4. MANAGEMENT OF THE PROJECT

This is a pilot project under the Diocesan Development department therefore will be very closely monitored by the Diocesan Development Department field officer located in Namalundu (Chikankata District) and Chirundu (Chirundu District) Parishes where the targeted communities are located. The Departments agriculture Engineer will visit the communities quarterly in order to give insitu technical advice where needed.

### 5. Reporting

The Promoter for Development who is the head of the Diocesan Development department will continue to oversee the works in this activity and therefore will also take full responsibility for the entire project including reporting to Diocesan central administration as well as Fairhandeln.

Annex 1. Historical Pictures



The two women of Cheeba watering their Garden using a treadle pump. While one is pumping the other is holding the pipe and in that way watering their gardens.