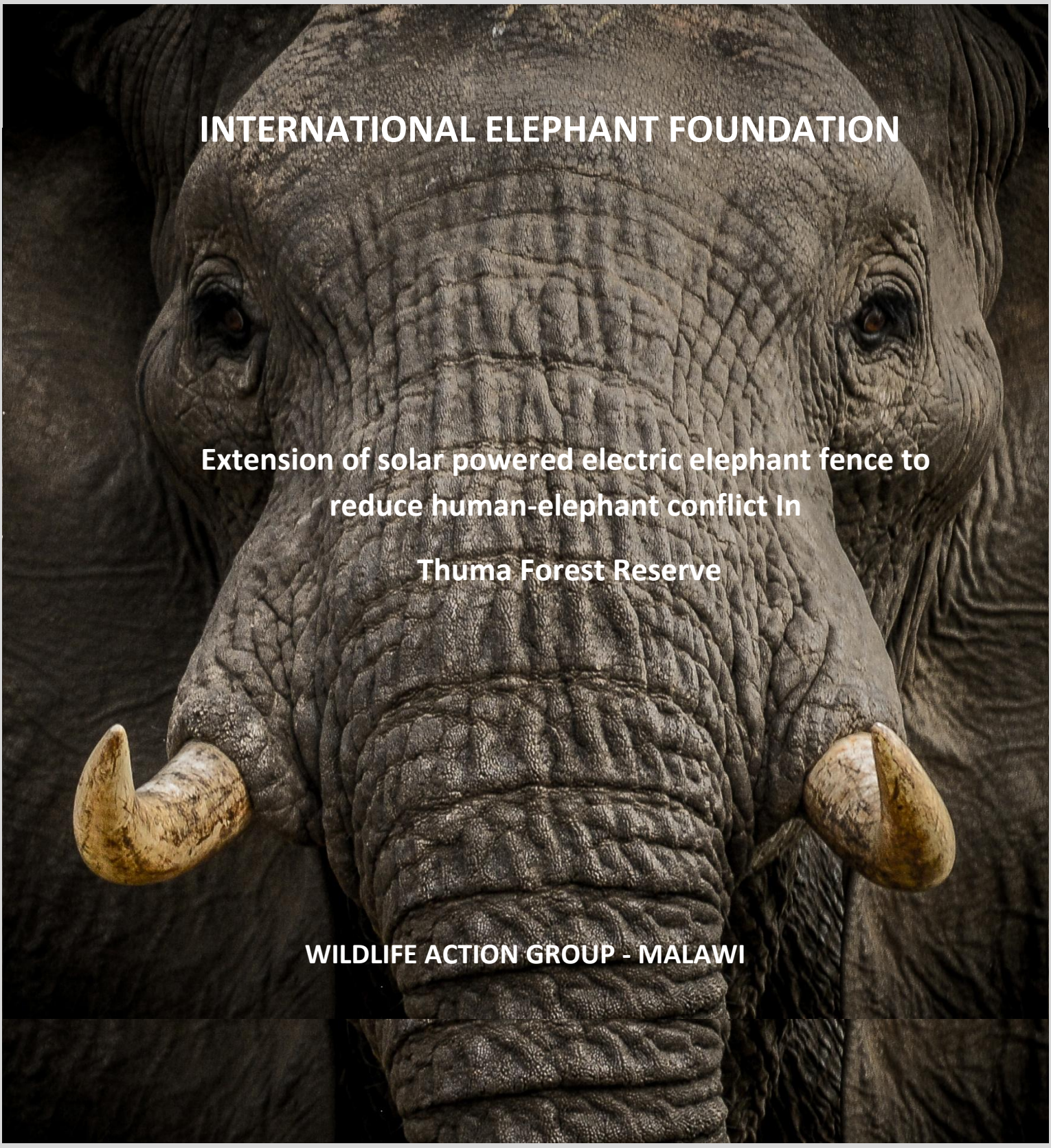

INTERNATIONAL ELEPHANT FOUNDATION

Extension of solar powered electric elephant fence to reduce human-elephant conflict In

Thuma Forest Reserve

WILDLIFE ACTION GROUP - MALAWI

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Budget
Total project budget: $ 9726 -
Total requested from the International Elephant Foundation: $9960
Project Start Date: April 2018
Project End Date: December 2018
Is any part of the project underway? No

Project Category
__X_Field Conservation
____Field Research
__X_Habitat Protection
____Conservation Education
____Professional Training/Technology Transfer/Capacity Building
____Zoo Research
__X__Other

Abbreviations:

DNPW:	Department of National Parks and Wildlife
DSFR:	Dedza-Salima Forest Reserve
DoF:	Department of Forestry
GoM:	Government of Malawi
TFR:	Thuma Forest Reserve
WAG:	Wildlife Action Group

The Project:

On the western side of Thuma Forest Reserve in an areas where there is no fence, elephants are leaving the Reserve and negatively affecting the day to day living of communities. This is causing food and personal security concerns, which results in a negative attitude towards elephants and the protected areas. Over the last two years populations where there is no fence are begging for Wildlife Action Group (WAG) to erect a fence line so elephants do not raid their crops. This project will address this critical situation by extending the solar powered electric fence providing personal and food security to communities.

The Aims and objectives:

To build a solar powered electric fence which will reduce elephants leaving the forest and crop raiding.

And to reduce human elephant conflict and subsequent human and elephant injury/mortality by preventing the elephants from leaving TFR and DSFR.

WAG anticipates :

- ✓ Mitigation of human-elephant conflict
- ✓ Increased food security due to a reduction of crop raiding
- ✓ Reduction of poaching occurring within the TFR and DSFR
- ✓ Increase positive attitude towards both Reserves, - elephants · Increase in personal security for local populations
- ✓ School attendance rates improving
- ✓ Zero impact on migratory routes used by elephants
- ✓ Increase in protected areas were elephants can roam
- ✓ Reduction in deforestation
- ✓ Generation of additional temporary local income through hiring to help construct the fence
- ✓ Provision of full time employment to maintain

WAG rangers training local men during the build. Behind is Thuma area were much deforestation has taken place.

The process:

In July 2018 WAG started collecting social economic data in villages living close to the boundary of Thuma Forest Reserve. Most people had stopped farming due to the regular crop damage caused by elephants. This area is predominately subsistence farmers and people are reliant on their crops to live.

Certain times of the year we saw an increase in the elephants leaving the reserve and Rangers were placed along the boundary to try stop or chase elephants back inside the reserve.

In October 2018 we held meetings with local chiefs and villagers to discuss the build and any boundary issues. All people were 100% behind the project and committed to assist us build the fence. WAG rangers surveyed the boundary, marking the proposed fence line.

The stretch of fence line was identified and walked by WAG using GPS equipment. The Department of Forestry along with local chiefs also attended to this, ensuring no boundary issues. The fence was marked. At this stage of the process we have also selected a route that:

- has least impact on the elephant movements

- will stop access of elephants to the villages who have been impacted most by roaming elephants
- is inside the reserve
- has relatively easy access for delivery of materials, (of course some access routes will have to be cleared)

Materials were delivered to the area. The 2018 fence extension was ready to start.

By replicating the simple design that has been used for our existing fence allows for easy and low cost maintenance and enables a larger section of the perimeter to be covered within the budget constraints.

Traditional authorities provided listings of people who would assist us to clear the fence line. A total of 300 local communities (gender equal) took part in the clearing, and building of the fence. This local work force were selected from villages closest to the fence who are mostly frequently being affected by the conflicts. Everyone was paid for the work carried out, and provided income to the local area, and further garner support for the reserve within the local communities.

A track was cleared 4 meters either side of where the wire was placed. All vegetation was slashed (cut) down to the ground, removing all grasses, bamboo, trees and branches. The area was hoed also to reduce the re-growth of vegetation. Old dry trees removed within close

proximity to where the fence line will be, and along the fence line. This reduces the chances of them falling on the fence, for branches growing onto the fence. The stumps of trees were cut on the actual fence line and burnt to ensure the tree is dead.

The solar box and energy station, energizer, regulator and one 140 watt solar panel was set up and placed in a secure enclosure beside the new accommodation for the fence attendants. 105 watt solar batteries wired up and placed in shock boxes (panels mounted on the shock box) along with key controlled switches to turn on and off the power. The wiring for the solar system was carried out by experienced WAG scouts. The fence has a voltage of over 6000V, and the electricity will be generated entirely by solar power.

The fence is a simple construction, with 4 wires (two positive and two negative) and existing trees used as posts used. The tree posts were approximately 75 to 100 meters apart. Using Donald, jumbo and combi tensioners, the wire was put up, all trees insulated against the electric current using bobbins, ensuring the current is kept high. Wire bridges placed around trees to insulate them from the electric current and fixed in place using wire clamps to make sure there is free movement of the current.

At the end of each day the fence power was turned on and tested to ensure was working, and had no faults. This meant the fence became live each day.

This type of fence is a replica of our current fence which has proven track record that works and is a deterrent to the elephants breaking through and reduces the H-E conflict.

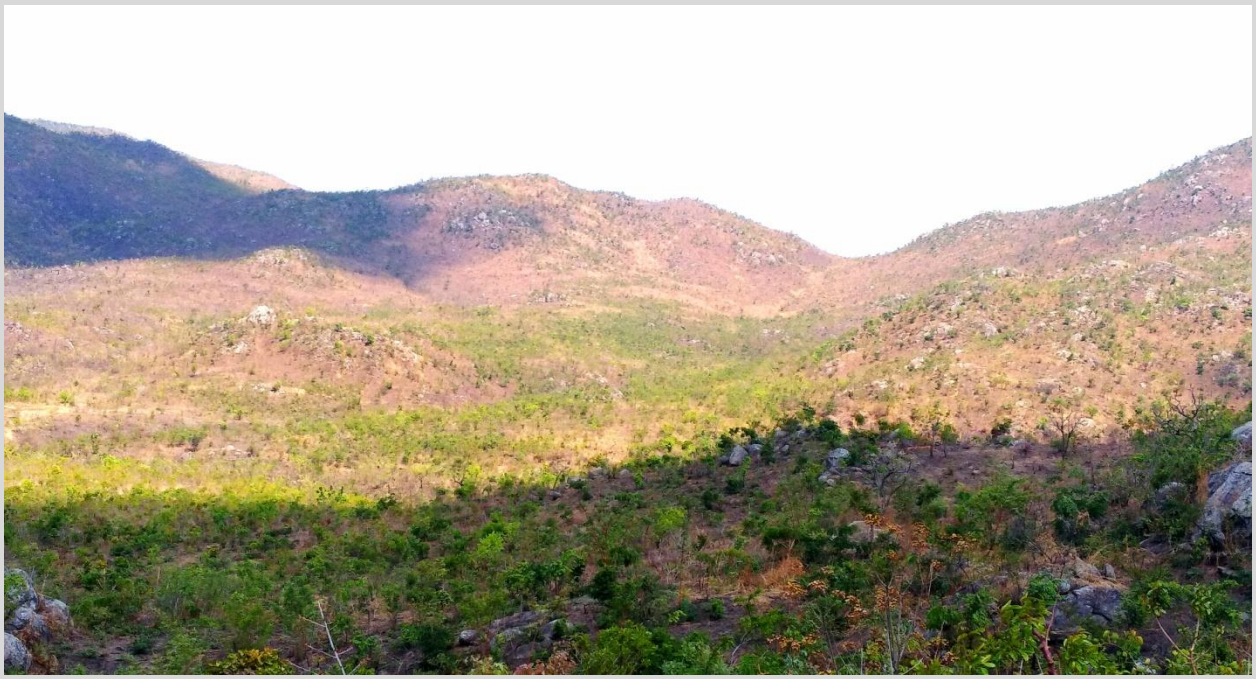
Full time fence attendances have been employed, trained, creating 4 new employment opportunities in an area were there are none. They are now working and daily walking the fence checking for faults and reporting daily. Their main duties are, walking the fence daily and clear vegetation, test, record and keep daily records of the fence performance (this includes testing batteries to ensure they are being charged and are not being drained), testing the strength of the current on the wire three times per day which is recorded in a daily log. W.A.G scouts are currently also involved with occasional maintenance and carry out routine patrols along the fence lines. They check and ensure that trees, wires; chains etc. are kept in good condition and assist if necessary where needed.

Each wire is 50kg, these men were carring 2 at a time, Incredible strong.

SUSTAINABILITY

The project relies on several major donors. The ongoing maintenance of our fences is integrated into our yearly budget which is funded by our long term donors such as WAGI, REA and the Abraham Foundation.

Beyond the year of funding, the fence will continue to be maintained by W.A.G employees and scouts. The fence is powered by solar power; therefore, no long term energy costs are involved other than general maintenance of solar panels and batteries, again to be conducted by W. A.G.



Area the fence will protect . You can see regeneration of trees everywhere.

Budget expenditure

Current expenditure to date is 6479 USD. We have only completed 11kms of a 20km fence line. We are waiting for additional funding to be sent so we can order more materials.

Once the complete fence line has been completed a full detailed overview of the project will be prepared.

Wildlife Action Group wishes to take this opportunity to thank the International Elephant Foundation for awarding us this grant which will have very positive impacts on the elephant population and local communities.