



Proposal to the African Elephant Fund

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| 1.1 Country: | Malawi |
| 1.2 Project Title: | Mitigation of HEC and addressing deforestation and forest degradation through income generating activities with Communities |
| 1.3 Project Location: | Thuma Forest Reserve, Central Malawi |
| 1.4 Overall Project Cost: | 64,000 USD |
| AMOUNT Requested from African Elephant Fund: | 59,484 USD |
| 1.5 Project Duration: | 2 years |
| 1.6 Project Proponent: | Department of National Parks and Wildlife |
| 1.7 Name of Project Supervisor: | Lynn Clifford |
| 1.8 Address of Project Supervisor: | Thuma Forest Reserve, PO Box 84, Salima. Malawi |
| 1.9 Telephone Number: | 00 265 991224599 |
| 1.10 Email: | manager@wag-malawi.org or lynardc1@gmail.com, |
| 1.11 Web site : | www.wag-malawi.org N/A |
| 1.12 Date proposal submitted: | 7th November 2017 |

2.0 Project Summary: (not more than 250 words)

Thuma Forest Reserve (TFR) covers an area of approx 19,000 hectares of unique biodiversity and sustaining over 35 mammal species including buffalo and is home to ≤ 10% of the total elephant population in Malawi. The North west and western side of Thuma Forest Reserve has been subject for years to deforestation due to charcoal burning and poaching has depleted all wildlife that lived there. 70km² or approx one third of the total forest has been destroyed due to illegal activities. Large groups of charcoal burners maintained control of the forest and any type of patrols to this area was met

with extreme aggression. Human Elephant Conflict fuelled negative feelings and there was zero community relations.

In late 2015 the erection of a solar powered electric fence funded by AEF along the northern western boundary brought a stop to much of the charcoal burning in the north western side of TFR. This enabled WAG to commence regular patrols there. WAG increased the patrol area to move south west. The permanent and regular presence of law enforcement rangers lead to many arrests. The amendment of the Wildlife Act brought harsher sentences for those found to be guilty of an offence. These combined factors have dramatically changed this barren, smoke filled area into an area where wildlife is returning, trees are regenerating and three herds of elephants along with some bulls are now seen as being resident.

Now we are receiving complaints of HEC along the western boundary, and Communities are requesting that a fence to built.

Funding for a new camp has been realised through USFWS, (see map 1)and building will start April 2018.

WAG wish to continue to extend the elephant fence along the western boundary and also introduce community income activities so replace natural resource dependency.

3.0 Which Priority Objectives and Activities (there may be more than one) in the African Elephant Action Plan does this project fall under? (For ease of reference, Priority Objectives are attached under Appendix 1)

This project will contribute to priority objective of the African Elephant Action Plan –

- (1) To reduce illegal killing of elephants**
- (2) Maintain Elephant Habitats and Restore Connectivity**
- (3) Reduce Human Elephant Conflict (HEC),**
- (4) To promote co-existence between local communities and elephants**

4.0 Project Rationale – why is this project necessary and urgent? What threats face this elephant population (give, for example, what information you have regarding population details, trends in population (downward or upward), ivory seizure information, details about levels of poaching, human/elephant conflict, etc.). (HEC, hunting, community relations)

Malawi's elephant population has halved in the last 20 years from over 4000 to less than 2000 by 2017 due to poaching.

All protected areas in Malawi are still seeing a decline in the elephant numbers, except for 4 protected areas, Thuma being one of them.

It is not only poaching which is a major threat to the decline of wildlife, Malawi's protected areas are now small islands surrounded by human, who's need for land and natural resources is increasing. In most cases people living close to protected areas and living in extreme poverty, are most marginalized with zero chance of work, incomes or any development. This cycle of poverty is directly linked to the depletion of the forests and hunting and killing of wildlife.

WAG have been operating in TFR for over ten years and are seeing increases in all wildlife populations including elephants.

In 2013 we conducted the first animal census, which gave us for the first time figures of the actual (minimum) number of elephants to work with:- Nov 2013 (98). November 2015 (116) and Nov 2017 (140).

Since 2012 we have been successful in finding funding to build and extend the solar powered electric fence, to ensure communities and their crops are safeguarded from elephants leaving the reserve. In areas where the introduction of a fence line has taken place, HEC has decreased 98% and community attitudes have positively changed. Crops are safe and harvested which support their families. A win - win situation.

Local community's attitude plays a vital role in the long term existences of elephants along with other wildlife and their habitat. It is sure that poverty is one of the major drivers of illegal activity. In many areas of the west people have no water, crops are failing, no other NGOs are working in these areas, the link between climate change and deforestation is being realized by local populations and now they wish to try reverse the damage they caused through tree planting, and agro forestry. WAG have partnered with a development NGO who have been working in this area now one year. With this project they are addressing agro cultural practices, introducing alternative cooking stoves and small scale irrigation schemes.

WAG are setting up natural resource committees and have also been assisting with vegetable and tree seeds, bee keeping clubs, including a pilot project of a bee hive fence in one area where we see most HEC.

This project will meet all the critical criteria that will increase the protection of elephants plus address to some extent community needs.

1. Protect the habitat,
2. Mitigate HEC,
3. Assist with community development with the aim to reducing forest produce dependency.

The extension of the solar powered electric elephant fence will reduce the frequency of HEC and in turn protect the local population, their crops and also the elephant population who will not come directly into contact with humans. Our current fence has an excellent track record. This final part of the fence will ensure Thuma Forest is surrounded by a fence and will leave only part of Dedza Salima Forest reserve to be fenced.

Although the elephant population has increased from approx 30 in 1998 to over 140 in 2017 due to anti poaching efforts by WAG, our elephant population are still under serious threat from poaching and habitat loss. Community relations have improved due to various efforts on the east, North, but over the last two years the killing/poaching of elephants have moved from the eastern side (where now there is a fence) to the western side where there is no fence, showing a direct link between HEC and killing of elephants.

If funded, this project will assist reclaim land and give more protection to approx 7000 hectares of forest, increasing the elephant habitat area, reduce HEC and provide communities with training and income generating activities.

5.0 Detailed Proposal – including activities to be carried out, milestones (at least quarterly milestones), timelines, equipment to be purchased, reporting procedures, etc. (not more than 1000 words). It will be helpful in evaluating this Project Proposal if you divide it into Phases such as Planning; Procurement; Implementation; Evaluation and Reporting

Should include anticipated benefits (including benefits to the conservation and management of elephant populations and communities) and outputs from the project, and how the project will be monitored and evaluated.

Main objective is address some main challenges in a holistic, systematic way. This project will start with WAG further supporting and creating natural resource committees and initiating some small income generating activities such as tree planting, home stead bamboo lots, bee keeping, involving locals in forest management such as fire management and management of the regeneration of previously deforested areas of miombo woodlands. Conservation education will be conducted in schools, trees planted along the boundary, bamboo planted in each village (many villages use bamboo for building houses and manufacturing furniture) different vegetables introduced to improve nutrition and used for selling, honey produced and sold to the Malawian market, bringing new opportunities to people and reducing the dependence on forest and wildlife product. One part of the boundary will be used as a pilot project, with a trail using a bee hive fence (like in Kenya) to see if this deters elephants from leaving the forest. The area to be selected has three tracks which are used on a regular basis by elephant to go into gardens to raid maize crops. This pilot project if successful may then be used in other areas where there is no fence.

The second phase of this project will be to erect a solar powered electric fence along the western boundary of Thuma Forest bringing security for our communities and further protection of the elephants.

The benefits will be far reaching.

Planning:

A full time extension and outreach worker will be working in this area to ensure community projects and school program is carried out successfully.

An additional 20km of electric fencing will be added to the existing 70 km of electric fencing.

The stretch of fence line has been identified and walked by WAG using GPS equipment.

There are several stages to the planning of this project

1. Meetings with local communities and leaders
2. Identifying fence line
3. Clearing the selected area
4. Marking the trees
5. Erecting the wire
6. Electricifying the wire and testing current
7. On going daily monitoring for faults and maintenance

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

WAG field manager will be responsible for all aspects of this project, with WAG scouts and a external expert consultant will be the main driving force of this construction. They have extensive experience having constructed the previous fence and been involved in routine maintenance of current fence over the last three years.

A local work force will be selected from each village closest to the fence and who are frequently being affected by the conflicts. This will provide additional income to the local area, and further garner support for the reserve within the local communities.

Procurement:

WAG have sourced three quotations for materials required and have selected a supplier based on several factors, cost, quality of materials and service/customer care during the process.

Material specifications have been specific to meet our requirements and are to a high standard and spare parts also included.

WAG will source as much of the materials as possible from local businesses also.

Implementation:

Once funding has been secured the selected fence line trees will be marked by WAG scouts.

Local labour will start by clearing a track of 6 meters wide along the fence line location. This will be done by slashing down to the ground all vegetation, removing all trees and branches. The area needs to be hoed also to reduce the re-growth of vegetation. Old dry trees will be 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. Any trees cut on the actual fence line need the stump to be burnt to ensure the tree is dead.

An energizer, 18a regulator along with 1 x 140 watt solar panels will be set up and placed in a secure enclosure beside the new accommodation for the fence attendants. Solar batteries 105 watt will be wired up and placed in shock boxes (panels will be mounted on the shock box) along with key controlled switches to turn on and off of power. The wiring for the solar system will be carried out by our expert rangers, experienced powered fence consultant The fence will have a voltage of over 6000V, and the electricity will be generated by solar power.

The fence is a simple construction, with 4 wires (two positive and two negative) and existing and new trees used as posts will be used. The tree posts will be approx 75 to 100 meters apart. Using Donald, jumbo and combi tensioners the wire will be put up, all trees will be insulated against the electric current using bobbins hence ensuring the current is kept high. We place bridges (wire) around trees to protect from them from the electric current and these will be kept in place using wire clamps to make sure there is free movement of the current. It will take approximately 2 months to source materials and take delivery.

At completion of each 200mtr section, the fence power will be turned on the tested to ensure it is working and before we move on to the next 200 mtrs. This means our new fence will become live and moving daily.

The fence will take approximately 6 months to complete.

This type of fence is a replicate of our current fence which has proven track record that is works and is a deterrent to the elephants breaking through and reduces the H-E conflict. Local labor along with experienced trained WAG scouts can easily construct the fence and the construction is basic but durable and easily maintained. The construction is cost effective in line with a tight budget but without cutting corners.

EVALUATION & MONITORING

Careful planning and communication with communities involved is necessary.

WAG and PREFORM have already started collecting data on the social economic situation in this area, what are the drivers of deforestation and what are the community needs. We have conducted awareness programs with all traditional authorities, chiefs and communities.

All data is being mapped using GSP's which will be part of the monitoring and evaluation plan.

All community work will be channelled through the natural resource committees. Peace work, bee keeping and the introduction of vegetables will ensure some well needed income generating possibilities.

The field manager along with WAG scouts and extension workers will oversee all activities and will be on site daily during the fence build to lead all aspects of the build, co-ordinate and be part the process from the clearing of the fence line, delivery of goods (materials will be checked, counted and signed upon arrival) and construction of the fence and also continue to monitor and check the fence after

construction is complete to ensure no faults occur after completion. All expenditure will be documents with receipts kept and logged for transparency and reporting. Accounts will be kept and forwarded to donor and photographs of the progress from beginning to end will be taken and used for reporting purposes. As this project will take place over a few months reporting will be prepared by field manager who will be on site and reporting will be as specified and available as required by the donor until the project is completed.

WAG acknowledges the importance of monitoring of the project outputs. Adaptive management is key and it is therefore important to formulate appropriate indicators and their MOVs (Means Of Verification) for each objective in monitoring. The records will be measurable, precise and consistent and will enable evaluation of the activities undertaken.

Data to be collected will include:

- Numbers of seeds donated, germination figures, income generated from veg, amount of honey harvested,
- Frequency of WAG and DNPW assistance requested to help chase problem animals for villages surrounding both Reserves
- The Frequency of crop raiding
- Frequency and forms of poaching occurring within the TFR and Dedza-Salmia FR
- Injuries/mortalities sustained by local communities as a result of elephant conflict
- Community perception of elephants
- Frequency of children being prevented from attending school as a result of the elephants.

Anticipated Benefits:

- reduction in people conducting and being dependant on charcoal burning and hunting
- alternative income generating activities
- regeneration of depleted forest giving additional habitat for wildlife and in particular elephants
- more controlled fire management inside forest
- Reduce the frequency of crop raiding in areas surrounding TFR, resulting in reduced human elephant conflict.
- Aid to reduce illegal poaching¹, habitat destruction and encroachment within TFR
- Increase positive attitude towards both Reserves, esp. Elephants
- Increase in personal and food security for local populations
- School attendance rates improving
- Generate addition local income through hiring locals to help construct the fence plus additional full time employment to maintain the fence
- Zero impact on migratory routes used by elephants

In the long term this project will demonstrate the effectiveness of electric fencing in the control of elephant movements, reduce human wildlife conflict in the area surrounding TFR and reduce illegal poaching affecting the elephants of the reserve.

6.0 Project Timeline – outline the timeline for proposed activities within this project. You may find it helpful to relate the timeline to the Phases identified in Section 5.0 above.

Task	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Creation of Natural resource committies 2018												
Forest work/ pruning miombo woodland 2018												
Commnity firebreaks 2018												
Tree Nurserys/planting 2018												
Bamboo planting 2018												
Sourcing of materials for fence construction 2019												
Clearing of vegetation to allow construction 2019												
Construction of access routes to fence area 2019												
Construction of electric fence 2019												
Construction of small camp 2019												
Testing of fence voltage 2019												
Evaluation of fence effect on conflict incidences 2019/2020												
Wet season (restricts building work)												

BUDGET

7.0 Has this project received or been pledged any other sources of funding (external)? Give all relevant details (for example, amount, source of funds, timetable, any restrictions):

A total of 120kms fence needs to be constructed so this is an ongoing project until the reserve is fenced completely.

7.1 Please provide a detailed proposed budget for this project (in US\$). You may find it helpful to relate expenditure to the Phases you have set out in Section 5.0

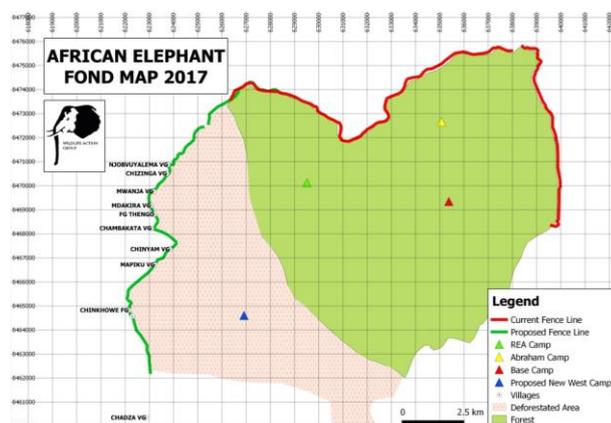
Budget line	Qty	Unit cost	Total
Equipment/supplies			
Energizer Stafix X18i	3	785	2355
RK200 alarm	3	13	40
2.24mm high strain stell wire	60	55	3284
earth pegs 120mm galv	80	48	3841
Fault finder	10	49	491
Stain insulators porcelain	2200	0.4	932
combi tensioner	1500	1	1059
Donald tensioner	1500	1	847
Nail on insulators	9000	0.1	1271
HT cable	8	29	230
side cutters	10	25	251
solar panels	6	186	1114
batteries	18	286	5143
hammers	10	8	80
panga/slashers etc	1	143	143
nails	200	1	286
shock box	1	162	162
wire clamps	2000	0	282
Regulator	3	64	193
transport from SA	1	1836	1836
Bee hives	50	74	3714
Packets of seeds, tomatoes/ spinach, rape, onions	200	3	600
Watering cans	40	4	143
Bamboo seedlings	1500	2	3000
tree tube for nursery	20	4	86
Tree seeds	20	5	100
wire for bee hives	10	29	286

Hive tools/brushes/	20	10	200
Bee suits	20	50	1000
gloves	20	8	157
boots	20	21	429
smokers	20	8	157
Fuel	1		3000
Vehicle maintenance	1		1000
Training / Capacity Building			
Bee keeping training	42	43	1800
Natural resource committee set up and training	42	30	1260
Fuel to visit site	42	45	1890
Production of awareness/ Educational Materials			
Educational module materials x 3 schools	3	1000	3000
Media coverage	4	85	340
Signs	3	18	54
Consultancy			
Fence experts builders	60	57	3429
			10000
Total			59484.08

Details included in Table annexed to the document:

Any other budget lines:

7.2 Please specify the proponents contribution towards the project



Please submit the completed proposal, either by:

Email:

Fax:

You should receive acknowledgement of receipt of your proposal within 14 days.

If you do not receive such an acknowledgement, please telephone:

Further details on any of the above details may be requested by the Steering Committee of the African Elephant Fund.

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