

THE RHINO ARK KENYA CHARITABLE TRUST

P.O. Box 181- 00517, NAIROBI, KENYA

TEL: +254 (0)20 2136010/11 • MOBILE: +254 (0)733 632460 / 724 604233

E-MAIL: info@rhinoark.or.ke • WEBSITE: www.rhinoark.org

Management interventions to alleviate human-elephant conflicts around Imenti Forest, Mt. Kenya Forest Reserve, amidst heightened insecurity caused by COVID-19.

Final Report

1. Identification:

<u>Partners Name</u>: *RHINO ARK KENYA CHARITABLE TRUST* <u>Budget line</u>: BAC 2020-32EAP-11267-SB-000676-14AC0004

POW 2019-2020 Sub-programme: [please complete]

Expected Accomplishment(s):

- Reduce illegal killing of elephants by retaliating farmers from forest-adjacent communities around Imenti Forest: Multi-sectoral and multidisciplinary approach in law enforcement created through improved coordination; Build capacity of forest-adjacent communities on value of elephant conservation.
- Reduce human-elephant conflicts between forest-adjacent farmers and crop-raiding 'elephants around Imenti Forest: Improve the effectiveness of the 53km long Imenti Electric Fence through a continuous fence maintenance programme; Strategic support to government partners in charge of Imenti Forest;
- Establish elephant fence breakage hotspots and provide interventions.
- Secure elephant population and maintain elephant habitats through community-based forest patrols and a network of locally based informants: Strengthen community benefit from secure elephant habitats through local de-snaring patrols and anti-

poaching programmes; Ensure sustainable utilization of forest products; gather local knowledge about illegal forest activities and community actions targeting elephants.

- Establish community livelihood improvement scheme and elephant education programmes to improve cooperation and collaboration with forest-adjacent communities: Link community livelihood improvements to conservation; Engage local schools and communities in elephant education programmes.

Output(s):

- Number of elephants exiting in the forest through the fence- verified by camera trap images;
- Fence breakage hotspot areas identified;
- Fence areas most affected by elephant breakage strengthened;
- Establishment of community patrol team who are active and mobile as well as fully engaged with duties;
- Kenya Wildlife Service facilitated to address promptly human-elephant conflicts;
- Reduced conflict reports received by Kenya Wildlife Service;
- Community stakeholder meetings and barazas held;
- Community Forest Associations properly established and acting as focal point to engage communities on forest user rights and elephant conservation;
- Monthly written and photographic programme reports.

<u>Title of the approved PRC project</u>: Management interventions to alleviate human-elephant conflicts around Imenti Forest, Mt. Kenya Forest Reserve, amidst heightened insecurity caused by COVID-19.

SSFA starting date: 01/12/2020

Reporting period: from 01/12/2020 to 30/11/2021

2. Summary of Status:

Imenti Forest has the highest density of elephants in Mt. Kenya Ecosystem. This elephant population has been in constant conflict with the local community. Between 2016 to 2019, Rhino Ark and partners built a 10-strand electric fence. The fence worked for a while before habitual fence-breaker elephants learnt how to go through the fence.

In the current project we mapped out all elephant fence breakage points along the 53km of Imenti Fence line. The major fence breakage hotspots were as follows: Themba, Kamutune, Kamitongu, Nchoroiboro and Naari. Construction of an electrified short fence with outriggers (1.2m long wire projection) has been initiated to upgrade the existing 10-strand electric fence along the five fence breakage hotspots. So far 17 km completed but the construction is ongoing. Three more powerful energizers have been installed which are approximately four times more powerful than the standard energizers installed along the other sections of Mt. Kenya Electric Fence. Camera trapping survey; on the other hand, revealed the behavior of the fence breaking elephants.

Supervision of fence maintenance has greatly improved after the supervisor was facilitate with a motorcycle. The Supervisor is able to meet all the eighteen (18No.) Fence Attendants along the Imenti fence line on a daily basis to monitor fence maintenance works. The Fence Attendants are highly motivated and well equipped with protective working gears; promptly supplied with fencing materials, tools and equipment. Support of Kenya Wildlife Service (KWS) vehicle operation with fuel and communication facilitation for the teams ensured that all fence maintenance issues were attended to within the 3hours of the incidence.

Construction of two animal grids along Ruiri-Meru road was completed in October 2021. This is proving effective at containing elephants from exiting the forest through Ruiri-Meru tarmac road at Kithoka and Ruiri.

Eighteen members of the local community have been engaged in fence maintenance. This is enhancing the ownership of the Mt. Kenya Electric fence by the local community. The team ensures that fence is powered throughout, above 5 kilo volts. In case of fence breakage, the team promptly repairs the fence.

Twenty schools participated in the Imenti Schools Essay Competition and some pupils reported that elephant meat is very delicious. Retaliating farmers had killed elephants that had raided their farms and meat shared among the villagers. Rhino Ark organized an educational tour for the winners in the schools' essay competition to Reteti Elephant Orphanage in Northern Kenya. Talks from the animal keepers helped the pupils appreciate the negative impact of killing elephants and the close similarity between human beings and elephants. The participating schools have formed *Wildlife Clubs* to educate members of the local community. Conservation education and outreach programme is needed to gradually change the attitudes and perceptions of the local community towards elephant and conservation in general.

Six community barazas were held to sensitize the local community on the plight of elephant and its habitat. The community were sensitized on the need to remove lethal fences that were killing elephants through electrocution. The engagement through the area Chief, KWS Warden, Assistant County Commissioner and DCI bore fruits as more than 80% of the lethal fences were removed.

Fifty-four members drawn from Lower Imenti Community Forest Association and Buuri Beekeepers were trained on modern beekeeping practices. Topics covered included beehive colonization; bees' management and feeding; beehive maintenance and inspection; honey harvesting and royal jelly and bee venom extraction and beekeeping as an agri-business venture.

With leadership from the Mount Kenya Trust, Imenti Community Patrol Team, patrolled the forest intensively covering a total 1569 km and 4715 km on foot and on vehicle respectively. The joint patrols were undertaken with Kenya Wildlife Service (KWS) and Kenya Forest Service (KFS) to curb illegal logging, illegal settlements, snaring and poaching of wildlife. Seven arrests were made all resulting into satisfactory prosecution with some culprits serving up to two years in jail or fined up to Ksh. 80,000. One ninety-one (191) snares were retrieved during the desnaring exercises; four (4No.) poachers'/illegal loggers den were destroyed and three hundred and twenty-five

(325) incidences of illegal logging were recorded. The presence of the patrol team acted as a deterrent to any-would-be poacher.

Six intelligence gathering cells were established around Imenti Forest; namely, Kithoka, Themba, Kamitongu, Nchoroiboro, Nkunga and Naari. Six out of the eighteen members of the local community maintaining the Imenti Fence line on a daily basis were selected and vetted to double up as both Fence Attendants and local informants. The informants are born, raised and residing in the same villages making it easy for them to operate without any suspicion. The intelligence information ranged from violation of the electric fence, illegal extraction of forest produce to installation of lethal fences targeting elephants.

Plans were initiated to regulate use of forest access gates and maintain a gate register at each gate. The stationeries were procured but the was a delay in installing the lockable steel gate. This made it difficult to man a gate opening that had no physical barrier. The CFA was sensitized to man gates once the lockable steel gates were installed.

Notable successes attributable to this project over the last six months include:

- (i) No single elephant was electrocuted;
- (ii) No incidence of retaliating farmer was reported;
- (iii) Not a single elephant broke through the new fence design- the short fence with outriggers;
- (iv) Training on modern beekeeping and follow up coaching has resulted in 63% hive colonization at Lower Imenti Apiary up from 0% hive colonization;
- (v) Sixteen out of twenty schools participating in the Imenti Essay Competition and educational tour to Reteti Elephant Sanctuary have established *wildlife clubs* within their school.

3. Activity delivery status

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
ACTIVITY 1.1.1 Communication plan developed with law enforcement agencies such as Kenya Police, Kenya Wildlife Service (KWS), Kenya Forest Service (KFS);	Initial community baraza was held at Kithoka attended by KWS, Kenya Police, DCI and Ministry of the Interior and Coordination.	List of participants Photographs Communication plan	30 th Aug 2021	Delayed	Restriction on social gatherings due to Covid-19. Engagement with law enforcement agencies is continuous process way beyond this project's cycle

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
ACTIVITY 1.1.2 Communication plan developed with local private and public stakeholders such as Kenya Power, local learning institutions and local leaders;	Through the office of the KWS Meru County Warden and Chief Kithoka, we engaged Kenya Power and Lighting Company (KPLC) on illegal power connections used to electrocute elephants	Communication plan	30 th Aug 2021	Delayed	Restriction on social gatherings due to Covid-19. Engagement with local private and public stakeholders is continuous process way beyond this project's cycle
ACTIVITY 1.2.1 Hold <i>Barazas</i> (i.e. name of community gatherings in Kenya) to sensitize the community of plight of elephant and its habitat;	Five Barazas were held at Kithoka/Themba; Naari- Nchege; Naari- Kathatene; Nchoroiboro/Nkunga; and Kamitongu	List of participants and photographs.	30 th Aug 2021	Complete	No challenge encountered
ACTIVITY 1.2.2 Establish and build capacity of Community Conservation champions (i.e. a network of community volunteers to educate fellow community members and school going children);	 Potential candidates of the conservation champion programme were identified; Conservation champion training modules were developed; Vetting of the Community Conservation Champions undertaken; The programme requires that the champions work on a voluntary basis, a lot of commitment and permanent residence in the area; thus, we thought it wise to give ourselves more time to fully understand the dynamics of the selected Conservation Champions before making an investment in terms of training and providing tool kit. 	List of selected Conservation Champions; Training modules.	30 th Aug 2021	On-going	The training modules had to be tailor-made for Imenti in line with the prevailing challenges; More than one-year engagement with the potential conservation Champions is required to pinpoint the exact persons who are committed for the programme and willing to work on a voluntarily basis.
ACTIVITY 2.1.1 Select and vet members of the fence-line community to participate in fence maintenance;	The Fence Implementation Committee (FIC) selected 18 members of the local community that had previously participated in Mt. Kenya Electric Fence construction; The names were vetted by the	Monthly Muster Roll for the 18 Fence Attendants engaged.	1 st Dec, 2020	Complete	The selection of the Fence Attendants was undertaken in an open and fair process with full participation of the local leaders, Kenya Wildlife Service, Community Forest Association

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
	respective chief and the Chairperson Community Forest Association.				and Rhino Ark.
ACTIVITY 2.1.2 Facilitate community-led fence maintenance;	In-house induction training undertaken covering the following: (a) Basics of an electric fence; (b) Fence construction materials, tools and equipment; (c) Routine fence maintenance; (d) Reporting procedures on status the fence; and (e) Human capital, welfare and HIV and AIDs. (f) The trainees also undertook practical in fence construction; Fence Attendants engaged.	Evaluation report on the fence maintenance team attending the training	7 th Dec, 2020	Complete	No challenge encountered
ACTIVITY 2.1.3 Establish fence supervision using a field motorcycle;	 Interviewing the potential supervisors; Acquisition of rider's license by the selected supervisor; Induction training on reporting protocols; Identification of the best suited model of the motorcycle; Procurement of the motorcycle; registration by National Transport and Safety Authority (NTSA) and acquisition of the insurance. 	Minutes of the evaluation panel detailing the outcome of the selection process; Technical report on the specifications (type, model and rating) of the motor cycle to be procured; Sales quotation; Local Purchase Order (LPO); Delivery Note; Copy of the logo book; Motor cycle work ticket/ Trip log.	30 th Nov 2021	Complete	National Transport and Safety Authority (NTSA) is yet to release the logo book; this notwithstanding, the motor bike is being used by the supervisor.

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
ACTIVITY 2.1.4 Equip the fence maintenance team with requisite working gear, fencing materials, tools and equipment;	Procured uniform for the fence maintenance team; Procured and supplied assorted fencing materials and equipment – energizers, posts, high tensile wires, U-nails, W-insulators, flood gate controllers among others; Procured tools and equipment for the fence maintenance team – single strainer, side cutting pliers, hole diggers, slashers, hammers among others.	Store ledger and stock control card; Goods Received Note (GRN); Stores Requisition and issue Voucher	7 th Dec, 2020	Complete	No challenge encountered
ACTIVITY 2.2.1 Support KWS vehicle operation with fuel and communication facilitation for the teams;	On a monthly basis we procured fuel and airtime for the KWS Meru County Warden and the Fence Supervisor.	Fuel Local Purchase Order (LPO)	30 th Nov 2021	Complete	Fluctuation in fuel prices. To mitigate, we reduce the quantities of fuel to match the budget provided.
ACTIVITY 2.2.2 Monthly fence meetings with key stakeholders and partners - KWS, KFS, National Government, Mount Kenya Trust and Community Forest Association (CFA) to physically inspect the fence and address emerging issues compromising on the efficacy of the fence;	Six Fence Committee meetings were held attended KWS, KFS, Mount Kenya Trust, Eden Trust and Community Forest Associations.	Minutes of FIC meeting.	30 th Nov 2021	On-going	The frequency of the meetings affected by Covid-19 guidelines. To mitigate, we have a WhatsApp group on which issues are addressed real-time.
ACTIVITY 2.3.1 Map out fence breakage hotspots;	A comprehensive survey of elephant fence breakage hotspot undertaken covering the entire 53km.	Report on elephant fence breakage hotspots	30 th June 2021	Complete	No challenge encountered
ACTIVITY 2.3.2 Deploy camera traps at fence breakage hotspot to monitor fence breakage	6No. Camera traps were deployed in the known elephant fence breakage	Pictorial report of the Camera trap survey	30 th Nov 2021	Complete	False images because the cameras are motion sensitive and therefore wind blowing

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
behaviour by elephant and the culprits involved;	hotspots; The cameras were secured with python master lock to avoid cases of theft; The local community were also sensitized that the research would help mitigate Human-elephant conflict. None of our camera was stolen; The cameras would be serviced after every 10days- replace the AA-batteries and the memory card;				vegetation triggered the camera to take photos. <u>Mitigation</u> : periodically clearing vegetation overgrowth.
ACTIVITY 2.3.3 Review the fence design at the problematic sections and implement appropriate fence upgrades;	 17km of electrified short fence with outriggers built. Outriggers are 1m long high tensile wires projecting from the short fence to deter elephants from accessing the fencing post in their attempt to break the fence; Three (3No.) more powerful mains Energizer installed at Themba, Kithoka and Kamutune (63 joules-energy- as opposed to the normal 16 joules energizer); Outriggers installed on the 10-strand fence on sections affected by elephant fence breakages; Construction of two (2No.) animal grids at Kithoka and Ruiri completed and the two projects commissioned. (Animal grids are rollers installed on fence sections where public road cuts through the forest. The rollers will allow free vehicle moment but no elephant can walk on the rollers) 	Progress report on review of fence design; Minutes of the Fence Technical Committee meetings - Animal Grid at Kithoka and Ruiri	30 th Nov 2021	On-going On-going	Having completed building a short fence around the identified elephant fence breakage hotspots, we have noted that elephants have shifted to new fence breakage points where the short fence has not been built. We are seeking for more funding to construct the short fence design along the entire 53KM around Imenti
ACTIVITY 3.1.1 With leadership from Mt. Kenya Trust, establish	A team of six rangers from Mount Kenya Trust backed up by KWS/KFS rangers undertook foot patrols	Monthly Field Reports	30 th Nov 2021	Complete	Change of tactics by offenders especially operating at night. To mitigate this, we established a

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
and facilitate community forest patrol teams;	 throughout the Imenti Forest; The team is fully equipped with a 4x4 vehicle, digital cameras and SMART phones that are GIS enabled and connected to a central server; The team removed wildlife snares; demolished poachers' dens; destroyed charcoal kilns; arrested illegal loggers; recorded wildlife sightings and recorded any unusual observation in the forest. 				hotline through which community would report any illegal activity. Local informants were also recruited and night sting patrol operations were initiated.
ACTIVITY 3.1.2: Build the capacity of patrol teams to develop work plan with clear outputs in terms of patrol efforts and spatial coverage;	In-house training of the team on the use of the SMART App periodically conducted.	Monthly Field Reports	5 th June, 2021	complete	No challenge encountered
ACTIVITY 3.1.3 Undertake joint security patrols with our partners KWS, and KFS;	Foot and vehicle patrols undertaken with a patrol effort of 648 hours and 292 hours respectively.	Monthly Field Reports	30 th Nov 2021	Complete	No elephant poaching reported in the last six months. This is a significant improvement because at the inception of this project, the patrol team had reported of three incidents of elephant poaching near Kithoka.
ACTIVITY 3.1.4 Facilitate monthly meetings to discuss field patrol reports with our partners KWS, KFS, Mount Kenya Trust and CFA;	On the first week of every month, we discuss the previous month's field report with partners and agree on action points.	Minutes of stakeholders meeting	30 th Nov 2021	Complete	No challenge encountered
Activity 3.2.1 - Working with KFS and CFA to develop forest action plan	After discussion with one of our partners, the Upper Tana for Natural Resource Management Project, it emerged that they had a preliminary budget to facilitate the review of the draft of the Lower Imenti Participatory	 Draft report of the management Plan; Signed deed plan. 	Ongoing	Delayed	Signing of the Deed Plan between the Chief Conservator of Forest and the Chairman CFA is a high profile meeting that we don't have a control over.

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
	Forest Management Plan.				
Activity 3.2.2 - Provide leadership to CFA membership registration process	Membership drive undertaken and 1130 membership Photo card issued and financed by each member; Membership of the CFA was further boosted by forest replanting programme known as Tree Establishment and livelihood Scheme (TELIS). Members would be allowed to cultivate food crops in the forest while tendering to young seedlings planted in their plots	Membership record; Annual membership fee record	30 th Nov 2021	Completed	No challenge encountered
Activity 3.2.3 - Regulate use of forest access gates and maintain a gate register at each gate	Requisite materials including gate register, pens, rulers, ink pads and notebook procured;	Gate register record books	ongoing	Delayed	Delay in installation of lockable steel gate made it difficult to man a gate opening that has no physical barrier. The CFA has been sensitized to man gates once the lockable steel gates are installed.
Activity 3.3.1 - Establish network of informants from the local community	6No. informants recruited to cover Themba, Kithoka, Kamitongu, Nchoroiboro, Nkunga and Naari; The informants worked undercover as Fence Attendants and they walked along the fence on a daily basis noting and reporting any security matter. Forestry and wildlife criminals profiled; some arrested and prosecuted. Patrol efforts were more successful in the instances when intelligence information was available.	 Confidential and actionable intelligence reports; Summary of intelligence reports 	30 th Nov 2021	Completed	No challenge encountered
ACTIVITY 4.1.1 Provide beekeeping training for improved	Resource person identified;Site visit of Lower Imenti apiary to	Certificate of Participation;	30 th Nov 2021	Completed	No challenge encountered

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
hive establishment and maintenance;	establish the challenges facing the project (only 2 hives colonized out of 80 hives; 2.5% hive colonization rate); Resource person developing modules tailor-made specifically for this beekeeping group; 54No. participants from Lower Imenti and Buuri Beekeepers trained; Topics covered include: beekeeping background and introduction; beehive colonization; bees' management and feeding; beehive maintenance and inspection; honey harvesting and royal jelly and bee venom extraction.	Community baraza; Pictorial report of the training;			
ACTIVITY 4.1.2 Facilitate an elephant essay-writing competition among area schools. Judges to be selected from the area committees and prizes given for the 1st, 2nd and 3rd place finishers;	 Evaluation panel was constituted comprising of representatives from Rhino Ark, Kenya Wildlife Service, Mount Kenya Trust, Bongo Surveillance Project and Wildlife Clubs of Kenya; The THEME of the essay competition was, "Forest Conservation our Responsibility" and the Title of the Essay Competition was, "The Elephant". 20 primary schools participated in the essay competition; In the essay a number of pupils wrote that "elephant meat is very delicious". The meat is from elephants killed due to community retaliation. Winners in the essay competition were sponsored for an educational tour to Reteti Elephant Orphanage. At Reteti, the pupils were given talks on the 	Poster Handwritten Essays by the pupils; Results of the Essay Competition; Photo- Reteti Educational Tour	30 th Nov 2021	Completed	No challenge encountered

Activity	Description of work undertaken during reporting period	Deliverables	Delivery date	Status of Activity (complete/ on-going/ delayed)	Comments - brief description of implementing challenges, strategy/actions which have been adopted to address these challenges and planned actions to mitigate any identified risks
	impact of killing of elephants and the kind of sufferings the young elephants go through without their parents.				

4. List of attached documents

- (a) Elephants violating the Rhino Ark Fence at Imenti;
- (b) Minutes Imenti Schools Essay Competition Planning Committee-First;
- (c) Minutes Imenti Schools Essay Competition Planning Committee- second;
- (d) Pictorial survey of the educational trip to Reteti Elephant Sanctuary;
- (e) Poster-The Essay Competition entitled "The Elephant".
- (f) Results of the Imenti Essay Competition 2021;
- (g) Hire of Meru National Polytechnic bus to transport pupils from Meru to Reteti Elephant Sanctuary;
- (h) Minutes of the Committee Mapping Imenti Forest Resources_First;
- (i) Minutes_ Forest replanting programme;
- (j) Minutes of Imenti Stakeholders Meeting with new partner, Aden Trust;
- (k) Training on Beekeeping at Imenti;
- (I) Report on the "Spatial Distribution of elephant fence breakage incidences from April-June 2021 along Imenti Forest, Mt. Kenya Electric Fence";
- (m) Field report "Mount Kenya Trust Patrol Summaries, April 2021";
- (n) Overview Mount Kenya Trust Field patrol from Dec 2020 to May 2021;
- (o) List of participants- Kithoka Community Meeting at Kithoka Primary School on 16th April 2021;
- (p) Minutes of Mt. Kenya Fence Implementation Committee meeting, 4th March 2021 at Kithoka Animal Grid, Imenti;
- (q) Pictorial survey;
- (r) Mount Kenya Trust Patrol Summary Report for Nov 2021;
- (s) Mount Kenya Trust_Imenti Patrol Team Field Report Summary from Dec 2020 to Nov 2021.

Cin	ma	+	ro.
JIE	ша	ιcu	re:

Date:

Name and title of signing officer: