

Big Tusker Project

Final Report

to

International Elephant Foundation

Report Period: January 2017 to December 2017

Report date: 31 January 2018

*Tsavo Trust requests that this report is **kept confidential**, and not made available to the general public due to the many varying sensitivities of the Big Tusker Project. If there is any information in particular that you would like to share publicly, please could enquire with the Tsavo Trust project investigators before doing so.*

1. Cover Page

Project Title:	Big Tusker Project (Aerial Reconnaissance, mobile Ground Teams and Intelligence and Investigation Teams supporting elephant protection / management)
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Co-Investigator:	Vanessa Moller Public Relations Officer Tsavo Trust Mobile: +254 717 111 117 Email: vanessa@tsavotrust.org
Affiliations:	Kenya Wildlife Service Save The Elephants Zoological Society of London US Fish and Wildlife Service USAID
Budget:	Total Project Budget: US\$ 409,000 Total Requested: US \$15,000 and Received from IEF US\$ 15,000
Project Starting Date:	01 January 2017
Anticipated Completion Date:	31 December 2017
Project Present Status:	Complete
Project Category:	Field Conservation and Field Research

2. List the overall and specific conservation needs this project addressed.

Overall conservation needs this project addressed:

The Tsavo Conservation Area (TCA) covers 42,000 km², housing 49% of Kenya's National Parks (NPs), including Tsavo East, Tsavo West and Chyulu Hills NPs. It is home to 36% of Kenya's elephants (*Loxodonta africana*), numbering between 12,866 elephants (Elephant Census, 2017). Despite the vastness of these NPs, Tsavo's wildlife relies upon community areas for their important seasonal and permanent habitats, resulting in many challenges, particularly poaching and conflict. Poaching, driven by the illegal wildlife trade, remains a significant threat with varying numbers (between 50 to 100) of elephants poached for their ivory annually (there are likely more undiscovered carcasses due to the vastness of Tsavo). History has shown over and over again that the elephant poaching threats to Tsavo can return rapidly (close proximity to Somalia and Mombasa – recognised as the main exit hub for east African ivory). Early detection of and rapid response to poaching incidents is key to addressing this threat.

Management Effectiveness Tracking Toolkit (METT) analyses have identified the need to improve intelligence gathering and response capabilities, both through aerial and ground teams, and through improved human intelligence gathering. The Kenya Wildlife Service (KWS) has requested support from Tsavo Trust (TT) and the Zoological Society of London (ZSL) to address these gaps. Both TT and ZSL work in partnership with KWS (formally recognized through valid MOUs) on various conservation matters within the TCA.

Specific conservation needs this project address:

- This project has maintained regular aerial support to KWS providing real-time intelligence on threats, poaching incidents, and monitoring of high value species, including elephants and black rhino (*Diceros bicornis*).
- This project has allowed permanent deployment of a joint Tsavo Trust/KWS protection teams to gather further intelligence through their patrols, respond to improved intelligence capabilities within the TCA, and conduct de-snaring and anti-poaching patrols.

This project continues to be an important one for the TCA given the many and differing challenges it faces on a daily basis; from its vastness and lack of road infrastructure, to its poaching threats and other illegal activities (charcoaling, livestock, logging and habitat destruction). Development represents a major concern to the long-term sustainability of Tsavo, particularly the transport corridors that divide the TCA in half. Continuation of this project is vital going forward given the fact that currently KWS have only two operational field aircraft for the whole country. Tsavo Trust is relied upon heavily for continuation of this aerial “blanket” and support to KWS activities within TCA.

3. Summarize the goals and objectives and describe any changes in goals and objectives from the original proposal.
4. For each objective, describe the specific actions taken to achieve that objective.
5. Describe any activities that differ from the original proposed actions and explain the reason for the change.

Goal

To save the remaining large bull elephant of Tsavo by providing enhanced elephant security in support of KWS through regular aerial monitoring ('eyes in the sky'); protection and de-snaring through the Tembo 1 and Tembo 3 mobile teams; monitoring and research through Tembo 2 and Tembo 4 mobile teams; improved intelligence and investigations capabilities ('eyes and ears on the ground') within the Tsavo Conservation Area in southern Kenya.

Specific emphasis is placed on locating and monitoring Tsavo's iconic large bull elephant carrying exceptionally large ivory and through a regular aerial presence, to deter poachers planning to target these iconic animals.

Objectives

1. To carry out regular and consistent **aerial protection and monitoring reconnaissance flights "Eyes in the skies"** - in collaboration with KWS over the TCA to locate and individually identify on a regular basis the known iconic Tuskers of Tsavo and support KWS with aerial back up during operations. By doing this, the plan is **to ensure the long-term survival of Tsavo's gene pool of such iconic elephant.**

Actions

 - Consistent aerial monitoring of elephants, including big tuskers, and threats in the TCA.
 - Provide aerial and ground backup to KWS when required during operations.
 - Provide a rapid reaction aerial platform to support to KWS.
2. **To support protection efforts.** Full-time deployment of the Tsavo Trust **Tembo 1 and Tembo 3** ground protection mobile team that provides operational support to KWS, to secure the southern boundary of TENP. **Tembo 3** provide additional security to the northern boundary of Tsavo West NP and parts of the northern boundary to Tsavo East NP.

Actions

 - Consistent ground patrol coverage and mobile deployments of Tembo 1 team into this poaching "hot spot" location.
 - Working in tandem with the aircraft and its findings.
3. **To ensure continuity of large bull elephant database collation through monitoring and research:** To regularly monitor big Tuskers through the full-time deployment of the Tsavo Trust **Tembo 2 and Tembo 4** ground monitoring and research teams. To visit all elephant carcasses for purposes of MIKE ('Monitoring the Illegal Killing of Elephants' set up by CITES) and to carry out ground follow up for carcass verification and ivory collection. By collating the information collected during reconnaissance flights and ground operations, Tsavo Trust records its own data pertaining to the large elephant bulls and iconic cows of Tsavo in a **high-quality database**, including photographic records, of Tsavo's iconic big Tuskers. This data is then shared with KWS and Save The Elephants for research and elephant management purposes.

Tembo 4 team was deployed in August 2017 at the request of KWS, to carry out similar operations to Tembo 2 but in Tsavo West NP.

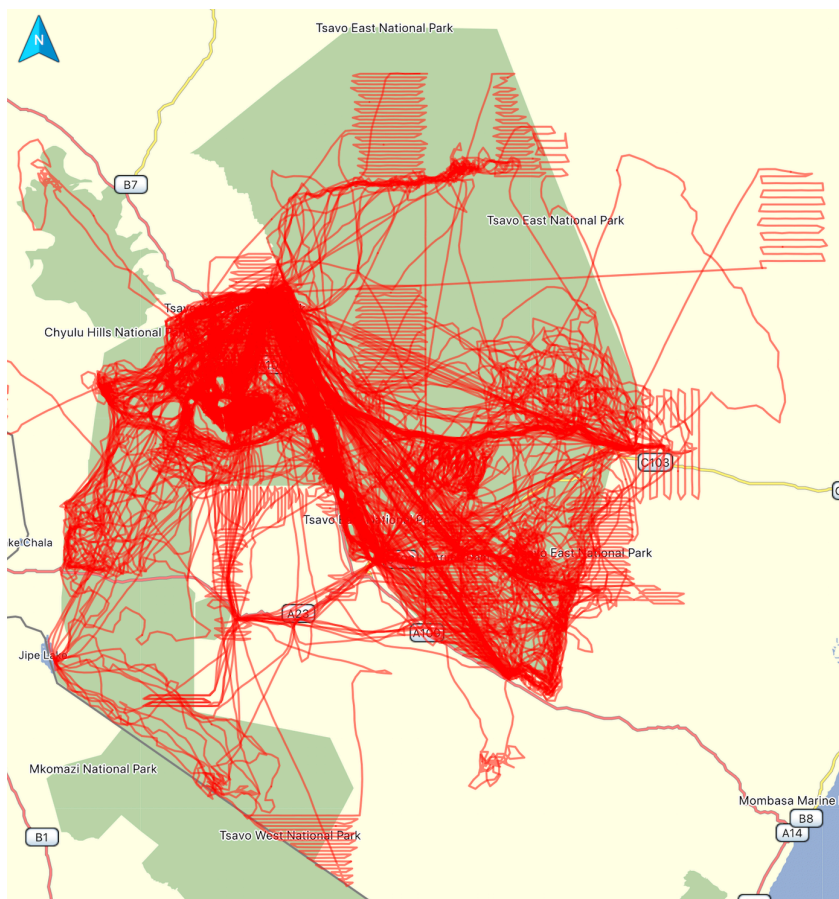
Actions

 - Consistent ground and aerial patrols in Tusker home areas.
 - Ground follow-ups to aerial intelligence, to confirm carcasses and recover ivory.

6. Describe the conservation outcomes for elephants, other wildlife, habitat and human communities, and list major findings and accomplishments to date.

Conservation Outcomes:

- Ensure and maintain the vibrant gene pool that still exists of Tuskers and to preserve this element of unique biodiversity within the TCA.
- Established measures that enhance big Tusker security through daily field patrols to monitor the big 'Tuskers' often in tandem with Tsavo Trust aircraft.
- Added surveillance time on the ground via Tembo ground units (eyes and ears on the ground are maintained).
- Daily data collection of 'Tusker' sightings as well as elephant movements is vital and shared with KWS and other BTP partners. Complimenting KWS's efforts in TCA through four Tembo ground teams coupled with regular aerial reconnaissance provides valuable security and research details, all of which play a significant role in security personnel deployments as well as elephant movement patterns.
- Raise profile of the iconic 'Big Tuskers' by highlighting their importance to KWS, partner organisations, and the public. They are extremely rare and valuable and with that warrant extreme support.
- Ensure continuity of the Big Tusker database that began in January 2013.
- Reduction in ivory poaching through continued support to KWS, as the lead Governmental wildlife agency in Kenya, in enhancing protection of elephants in the Tsavo Conservation Area
- Verify elephant carcass mortality and recovery of ivory – number of carcasses visited and number tusks recovered.
- Reduction in ivory trafficking through supporting KWS Intelligence and Investigation activities through arrests and prosecutions of ivory dealers and traffickers.
- Locate "hot spot" poaching areas through locating elephant carcasses as well as ivory collection from elephants having died from natural deaths.



With a total of **103,777 kilometres** over **867 hours** of flight over the TCA in 2017, many areas, particularly poaching 'Hot Spot' zones and areas where the known large 'Tuskers' frequent, have been regularly covered. This ongoing aerial and ground team presence is a deterrent to poaching and other illegal activity within the TCA.

Map shows flight paths flown by Tsavo Trust aircraft over the TCA from January 2017 to December 2017 where 103,777 kilometers were flown over 867 hours of flight

January to December 2017 Field Activities Summary:

The table below summarizes number of hours flown, miles covered, individual big “Tuskers” observed, ivory recovered, numbers of fresh and recent elephant carcasses, numbers of poacher’s camps/blinds/hides and platforms, number of joint TT/KWS arrests and number of aerial responses to armed situations for the first 6 months of 2017.

2017 Field Activities Summary - Aerial and Ground Operations (“Big Tusker Project”):

Activity	Hours Flown	Kilometers Covered
Aerial Reconnaissance	867 (Ave. 72 p/month) Average 120km p/h of low level flight	103,777 (Ave. 8,648km p/month) Flights carried out jointly with KWS staff
	Field Patrol Days	Kilometers covered
Ground Activities (Joint KWS / TT)	Protection teams: 677 days Monitoring teams: 359 days	Protection teams: 81,166 km Monitoring teams: 57,070 km
	No. Observed	
Big “Tuskers”	Total: Bulls - 10 Super Tuskers, 18 emergers & 7 Iconic Cows Total sightings aerial & ground teams = 150 bulls & 73 cows Ave. 1 Tusker sighting every 0.6 days	
“Tuskers” lost	6 confirmed (4 bulls, 2 cows), 3 unconfirmed (2 bulls, 1 cow): 1. SA2 – poached ivory recvd. 4/1/17 (51 & 50.5kg). Poachers apprehended – TENP 2. DI1 – believed to have been poached – 24/12/16, TENP 3. KA1 – died naturally, found 20/2/17. Ivory - 53.5 & 52.5kg. TWNP 4. ND1 – Euthanized, HWC – spear wounds, 22/7/17. Ivory 52 & 51kg - Amboseli 5. F_VPL – died naturally (old age/drought), found 7/8/17, TENP 6. F_MU1 – died naturally (old age/drought), found 12/10/17, TENP 3 unconfirmed (2 bulls, 1 cow): 1. TH1 – missing since March 2016, last seen TE N/Area, TENP 2. MO1 – missing since May 2016, last seen on the Ranches! 3. F_ND1 – missing since December 2016, TENP	
	No. Recovered	
Ivory recovered	241 elephant tusks (largest 53.5 & 52.5kg) • 39 tusks recvd. from 11 ivory dealers (31 tusks = 290kg), 7 Ele. Poachers (8 tusks = 136kg) – Total 18 arrests made (KWS / TT) • 202 tusks recvd. from aerial & ground team findings (KWS / TT)	
Elephant carcasses	Fresh (less than 3 weeks old)	Recent (less than 3 months old)
	110 (c of d: 5 train hit, 3 hit by truck, 11 poached, 87 natural, 4 unconfirmed)	52 (3 Poached, 42 natural, 7 unconfirmed)
Total located	TOTAL 162 carcasses located	
Ele. Carcasses/hrs flown	1 every 5.3 hours of flight	
Poachers camps/hides	Fresh - 27	Recent - 16
Arrests	101 - by KWS / TT – (11 ivory dealers, 7 ivory poachers, 23 bush meat poachers, 59 illegal livestock, 1 other)	
Snares/traps recovered	1,008 by joint KWS / TT Tembo Teams (41 large, 208 medium, 759 small)	
Response/support to KWS - armed incidents	7 (5 re. elephant poachers, 1 re. rhino poachers, 1 other)	
Other Illegal activities seen	627 cattle bomas (244,590 plus cows, 88,000 shoats, 1,764 camels & donkeys, 1,113 people seen, 27 charcoal kilns – during air recces)	
Written reports to KWS	514 (daily email reports, various communications & monthly reports)	
Meetings & Interaction with KWS	• Daily field collaboration with KWS personnel by Tsavo Trust ground and aerial teams • Regular formal meetings with KWS in various locations including TCA HQ; TENP & TWNP HQ; KWS HQ Nairobi & Tsavo Trust HQ	

Notable occurrences: January 2017 to June 2017 (See interim report)
Notable occurrences: July to December 2017

Sadly, six Big 'Tuskers' are confirmed to have died, **Satao 2** was poached in January 2016, **Dika**, believed to have been poached in December 2016 and **Kamboyo**, who died naturally in Feb 2017, ND1 euthanized after Human Wildlife Conflict incident in Amboseli area, and two cow 'Tuskers' **F_VPL** and **F_MU1** both died of old age in drought conditions.

There are also three unconfirmed losses of **Tambanguji** – missing since March 2016, last seen TE N/Area, and **Morondo** – missing since May 2016, last seen on the Ranches. **F_ND1**, missing since December 2016.

It is important to note again here that due to the sheer size of Tsavo and the fact that so few roads exist in many places, it is impossible to cover and secure the entire area. The poaching of the famous super Tusker called Satao in May 2014, Dakota in February 2015, Dika possibly in December 2016, and Satao 2 in January 2017 clearly shows this. But we continue to believe that without this aerial component the situation would be much worse with no "eyes in the sky" to assist KWS in ground deployments. It is difficult to quantify but the fact remains that without aerial presence an understanding of the threats and challenges to management would not be achievable. Regular aerial reconnaissance provides an absolutely vital conservation tool in the fight for wildlife protection.

December 2017:

Thanks to the generosity of 2 support partners, Tsavo Trust was able to purchase a used Super Cub aircraft to increase the capacity and consistency of aerial reconnaissance flights over the Tsavo Conservation Area

Photo below shows Tsavo Trust Super Cub 5Y NRF during TCA Aerial Reconnaissance flight in December 2017.



7. Approximately how many humans are impacted by your project? Approximately how many elephants are impacted by your project?

Humans impacted by project: Humans directly affected by this project are shown in the summary table, and essentially are those involved in illegal wildlife activities within the Protected Area

Elephants impacted by project: 12,866 elephants (2017 TCA Census)

8. Describe any problems discovered or occurring during this grant period

No problems were discovered or occurred during this grant period.

9. Was your project successful? State short and long-term goals that you are using to evaluate your accomplishments.

Yes. Short and long-term goals that are being used to evaluate accomplishments include:

Aerial Reconnaissance desired status used to evaluate accomplishments:

- Consistent aerial presence across the TCA: 867 hours flown; 103,777 kilometers covered
- Continued monitoring to provide information for ground security deployments
- Reduce number of poached elephant
- Destroy and reduce number of poaching activities
- Continually give KWS and Tembo teams location info. So, effective ground security deployments can be made and in so doing reduce illegal activity
- Be positioned to react swiftly to armed threats

Ground anti-poaching team desired status used to evaluate accomplishments:

- Significantly reduce elephant poaching
- Arrests of elephant and bushmeat poachers
- Work in tandem with aircraft to locate carcasses to ascertain cause of death
- Recover as many elephant tusks from poachers or found carcasses as possible
- Locate and destroy all poacher equipment and camps/blinds found
- Remove all snares found

Ground monitoring and research team desired status used to evaluate accomplishments:

- Regular monitoring enhances their security and gives a presence in their home range
- Continue to provide this support to KWS
- Continue to provide support to KWS for MIKE data
- Continue to maintain the "Tusker" database
- Continue to collect ivory from carcasses to stop them entering the illegal market

Human Sources desired status used to evaluate accomplishments:

- Human Sources are identified and recruited for each key target community and are regularly communicating with intelligence officers and providing accurate and timely information.

10. Based on this Project, what is the “next step” for this project and does it have implications for future conservation actions?

The “next steps” for this project are:

- To continue as a support partner to KWS by maintaining capacity for Aerial Reconnaissance flights through regular reconnaissance flight of two Super Cub aircraft (5Y TTZ and 5Y NRF). Both Piper Supercub aircraft are now owned by Tsavo Trust and deployed. Fundraising is ongoing to raise funds to overhaul and recondition a third aircraft (5Y ACE), as well as to ensure funds are available to cover the aerial operating costs.
- To continue as a support partner to KWS through Biodiversity Protection ground operations to be maintained through the operations of two of ground Biodiversity Protections units (Tembo 1 and Tembo 3) operating mainly in Tsavo East and Tsavo West National Park and community areas buffering the National Park.
- To continue as a support partner to KWS through Research and Monitoring ground operations to be maintained through the continued deployment of two ground research and Monitoring units (Tembo 2 and Tembo 4) operating in the TCA.
- Ongoing development of Intelligence and Investigation teams, in collaboration with KWS.
- To offer assistance to communities living in the TCA through expanding operations where necessary to partner Community Conservancies bordering the National Park including Kamungi Conservancy and Dakota to further engage with the community to improve livelihoods and to protect and conserve the wildlife and habitats of these areas.
- To establish a ‘Super Tusker’ Museum

11. Provide at least one human interest story. If available, please include a photo of the incident described.

Passing out parade of 2017 Wildlife Conservancy Supervisors' Course

On the 17th of November 2017, two Kamungi Community scouts successfully passed out from the two-month Wildlife Conservancy Supervisor's Course at the KWS Law Enforcement Academy at Manyani in Tsavo. The course covered the following subjects; Drill, Bush Craft, First Aid, General Law, Battle Procedure Order, Disaster Management, Method of Instructional Technique, Radio communication, Leadership, Fitness Training, Wildlife Education, Wildlife Act and Land Navigation.

Senior KWS officials at the event included KWS Deputy Director of Parks and Reserves, and Commandant of the KWS Law Enforcement Academy. The Kamungi Conservancy scouts were supported at their graduation by their friends and family, as well as Josh Outram from Tsavo Trust.

The two Scouts from Kamungi Conservancy, Joshua Kitavi Muli and Benjamin Ndolo Wambua, were among a select group of scouts from wildlife protection organisations around Kenya including Tsavo Trust, Kamungi Conservancy, Lewa Conservancy, Northern Rangelands Trust, The Borana Conservancy and Big Life Foundation, to successfully graduate from the course. Joshua and Benjamin will now return to Tsavo Trust's Tembo 3 protection unit, based in Kamungi Conservancy in the Tsavo Conservation Area, where they will undertake their new roles having been promoted to Senior Scouts following their graduation from the KWS Law Enforcement Academy. Both Scouts are from the local community in the Kamungi Conservancy, and Tsavo Trust are proud of their achievements, having sponsored these young men through their training as Scouts.



Passing out parade at the KWS Law Enforcement Academy in Manyani, Tsavo – November 2017

12. In 500 words or less, summarize the progress and results achieved. This will be used for media and donor recruitment.

During 2017 Tsavo Trust carried out a total of 103,777 kilometers over 867 hours of flight over the Tsavo Conservation Area focussing particularly on poaching 'Hot Spot' zones and areas where the known large 'Tuskers' frequent. This ongoing aerial and ground team presence is a deterrent to poaching and other illegal activity within the TCA.

Sadly 6 Tuskers (4 bulls and 2 cows) are known to have died 2017, whilst 3 further Tuskers have not been seen for some time and are also believed to have died.

Only 6 Super Tuskers are known to remain in the Tsavo Conservation Area. A further 18 emerging Tuskers are being monitored, and given the chance to live a full life, they will become the Super Tuskers of tomorrow.

4 iconic cow Tuskers are seen regularly, sadly two frail cow 'Tuskers' were lost in the drought conditions experienced in Tsavo in 2017.

Biodiversity Protection, Research and Monitoring operations are only possible through the generous donations and support from so many individuals and essential conservation partners, including the International Elephant Foundation, Zoological Society of London, US Fish and Wildlife Service, Oak Foundation, Save The Elephants and Tusk Trust, among other generous individuals and anonymous supporters, all of whom offer vital support allowing Tsavo Trust to work alongside the Kenya Wildlife Service in protecting the magnificent 'Big Tuskers' of Tsavo.

13. In 50 words or less, summarize the progress and the results achieved. This will be used for social media.

From January to December 2017 Tsavo Trust flew 867 hours covering 103,777 kilometers over Tsavo. 241 elephant tusks were recovered, and 162 elephant carcasses were discovered. Poaching remains a real threat to the elephants of Tsavo. Multiple arrests were made during Tsavo Trust / KWS operations, 1,008 snares recovered, and 7 responses were made to armed incidents.

14. List all organizations associated with this project and their roles in the project.

- **Kenya Wildlife Service (KWS)** – Kenya national wildlife authority
- **Zoological Society of London (ZSL)** – works closely with Tsavo Trust and KWS on a daily basis across all activities.
- **Save The Elephants** – provide co-financing for the Big Tusker Project, as well as being a collaborative partner.
- **US Fish and Wildlife Service** - provide co-financing for the Big Tusker Project
- **Oak Foundation** – provide co-financing for the Big Tusker Project
- **Tusk Trust** - provide co-financing for the Big Tusker Project
- **Kamungi Conservancy** – conservation partners bordering Tsavo East National Park. Kamungi Scouts patrol alongside KWS Rangers in the Tsavo Trust anti-poaching ground teams.
- **USAID** - provide co-financing for the Big Tusker Project and community training and equipment.

15. Include a financial report of International Elephant Foundation funds spent.

Budget table showing total project costs (All costs in US\$)

Budget Item	Amount received from IEF	Date Purchased	Actual Costs (US\$)	TOTAL IEF Contribution to Project Costs (US\$)
Purchase of 24 drums Avgas from Nairobi @ \$500 per drum (including transportation costs Nairobi to Tsavo)	12,000	12 drums 13 th March 2017 and 12 drums second half 2017	12,000	12,000
Part contribution to vehicle running costs of Tembo 3 anti-poaching team (\$1 per km / including maintenance and fuel) covering 3,000km over the report period	3,000	\$250 per month	3,000	3,000
TOTAL COST US\$	15,000		15,000	15,000

16. Submit at least five high resolution digital images (350kb or over) representative of the Project as separate individual files. Please include at least one photo with an elephant in the frame that demonstrates your project activities.

Photos attached:

- Big Tusker - Lugard in Tsavo West - Photo credit Richard Moller, Tsavo Trust
- Big Tusker – Ittalal in Tsavo West – Photo credit Richard Moller, Tsavo Trust
- Big Tusker - Dida (female) in Tsavo East - Photo credit Richard Moller, Tsavo Trust
- Tsavo Trust aircraft on Aerial Reconnaissance flight over Tsavo East - Photo credit Josh Outram, Tsavo Trust
- Elephant carcass spotted from the air – Tsavo Trust
- Kamungi Scouts on pass out parade at KWS Law Enforcement Academy – November 2017

17. Submit at least one video clip. This can cover anything you think IEF and/or the public might find interesting as long as it relates to the project funded by IEF. You can explain the goals, objectives and significant outcomes of your project, or take us through a day in the life of a patrol, or tell us why your project has greater implications for elephant conservation. Please very briefly acknowledge the International Elephant Foundation. If English is not your first language, please provide a written transcript of the text. Please do not add music to your video.

Video clip to be edited and sent through separately in due course.

18. Do you intend to publish and/or present your findings at a conference or symposia? Please provide us information about the journal/conference/symposia and a timeframe. Please send a copy of all future publications that result from this study.

No

19. Please list all websites, blogs, social media accounts, etc associated with the project, its investigators, and organizations (this includes Facebook, Twitter, Instagram, etc)

Website: <http://tsavotrust.org/>

Facebook Page: <https://web.facebook.com/TsavoTrust>

Twitter account: <https://twitter.com/TsavoTrust/>

Instagram account: <https://www.instagram.com/tsavotrust/>

With appreciation and thanks to International Elephant Foundation for their support of Tsavo Trust's 'Big Tusker Project', Tsavo Conservation Area.

Richard Moller – Tsavo Trust – Chief Executive Office

February 2018