

Big Tusker Project - 2018

Final Report

to

International Elephant Foundation

Report Period – January 2018 to December 2018

1. Cover Page

Project Title:	Big Tusker Project (Aerial Reconnaissance, mobile Ground Teams and Intelligence and Investigation Teams supporting protection / elephant management)
Principal Investigator:	Richard Moller Chief Executive Officer Tsavo Trust PO Box 204 – 90128, Mtito Andei, Kenya Mobile: +254 722 203 554 Email: richard@tsavotrust.org
Co-Investigator:	Nic Cahill Development Officer Tsavo Trust PO Box 204 – 90128, Mtito Andei, Kenya Mobile: +254 722 360380 Email: nic@tsavotrust.org
Affiliations:	Kenya Wildlife Service US Fish and Wildlife Service USAID Save The Elephants Zoological Society of London
Budget:	Total Project Budget: US\$ 800,000 Total Requested: US \$15,000
Project Starting Date:	01 January 2018
Anticipated Completion Date:	31 December 2018
Project Present Status:	Complete
Project Category:	Field Conservation and Monitoring

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 12,866 elephants (TCA Aerial Census, Feb. 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 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 joint TT/KWS protection and monitoring 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. TT 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 last remaining Super Tusker elephants of Tsavo by providing enhanced elephant security in support of KWS through regular aerial monitoring ('eyes in the sky'); anti-poaching and de-snaring through the Tembo 1, Tembo 3, Tembo 5 and Kamungi Scouts 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 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 biodiversity protection efforts.** Full-time deployment of the Tsavo Trust **Tembo 1** ground biodiversity protection mobile team that provides operational support to KWS, to secure parts of the southern boundaries 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. **Tembo 5 and Kamungi Scouts** provide protection mainly in the Tsavo 'Triangle' area of TENP, and Kamungi Conservancy.

Actions

 - Consistent ground patrol coverage and mobile deployments of Tembo 1, 3, 5 and Kamungi Scouts teams into "hot spot" locations.
 - Working in tandem with the aircraft and its findings.
3. **To ensure continuity of Super Tusker elephant database collation through consistent monitoring:** To regularly monitor iconic Tuskers through the full-time deployment of the Tsavo Trust **Tembo 2 and Tembo 4** ground monitoring 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 as necessary for elephant management purposes.

Actions

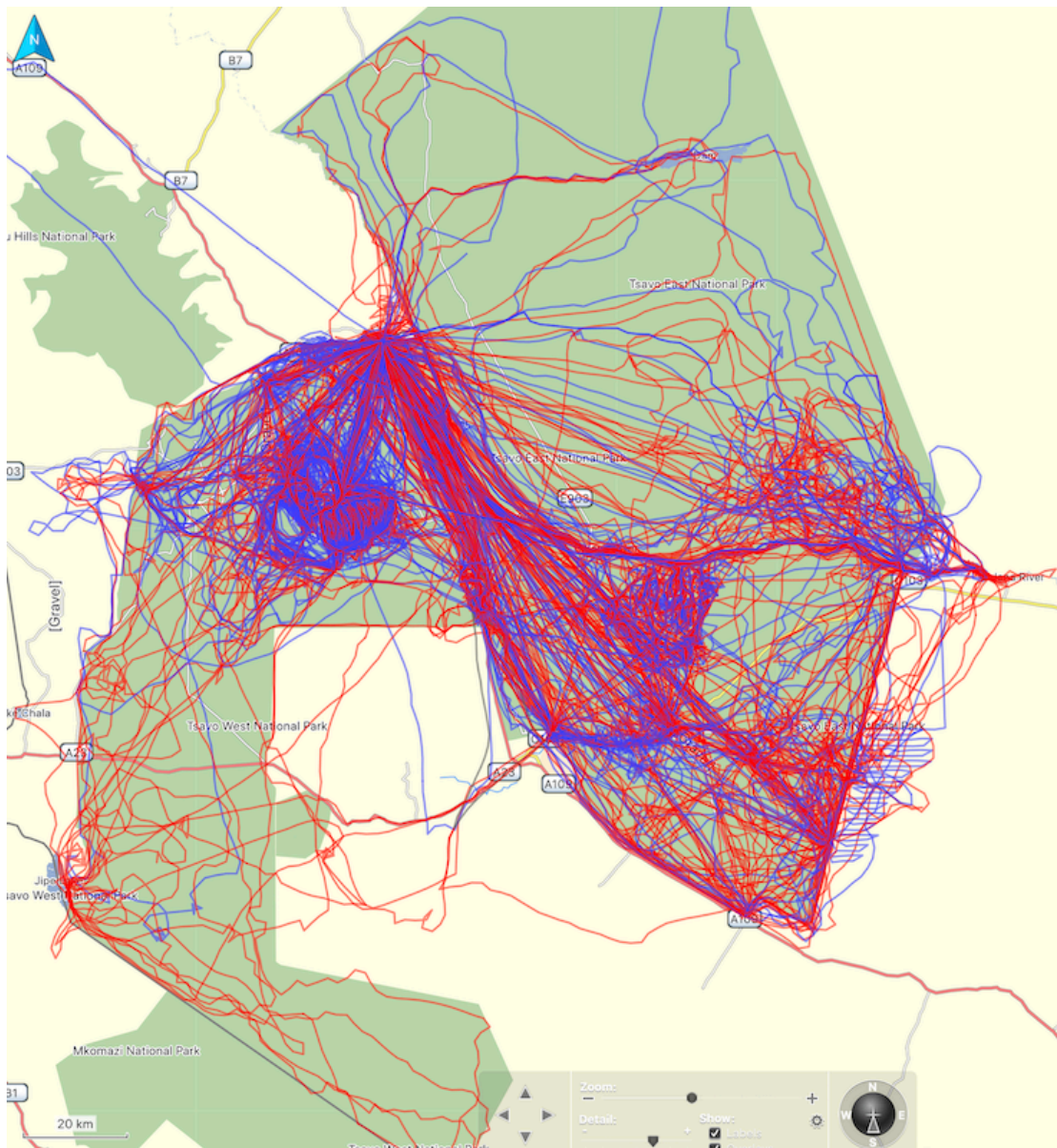
 - Consistent ground and aerial patrols in Tusker home areas.
 - Ground follow-ups to aerial intelligence, to confirm carcasses and recover ivory.

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

Conservation Outcomes:

With a total of **101,262 kilometres** over **863 hours** of flight over the TCA in the 12 months of 2018, many areas, particularly poaching 'Hot Spot' zones and areas where the known large 'Tusked' frequent, have been regularly covered (this equates to 18 flights between London and New York). This ongoing aerial and ground team presence is a deterrent to poaching and other illegal activity within the TCA.

By using the iconic Tuskers as a tool to raise funding and awareness this project actually covers so many other aspects of habitat protection, such as endangered species monitoring (Hirola, Grevy's Zebra, Wild Dog and varying red listed endangered raptors), predator monitoring and locating many other forms of illegal activity that can be acted upon swiftly and addressed (poaching, illegal livestock, illegal hardwood extraction, charcoaling, etc).



Map shows flight paths flown by Tsavo Trust aircraft over the TCA from January 2018 to December 2018 where 101,262 kilometres were flown over 863 hours of flight

2018 Field Activities Summary – Aerial and Ground Operations

Activity	Hours Flown	Kilometers Covered
Aerial Reconnaissance	863 (Ave. 72 p/month) Average 117km p/h of low-level flight	101,262 (Ave. 8,439km p/month) Flights carried out jointly with KWS staff
	Field Patrol Days	Kilometers covered
Ground Activities (Joint KWS / TT)	Protection teams: 860 days Monitoring teams: 455 days	Protection teams: 87,513 km Monitoring teams: 63,570 km
Rhino specific flights	290 (Ave. 24 p/month)	34,118 (Ave. 2,843km p/month)
	No. Observed	
Big “Tuskers”	Total: Bulls - 8 Super Tuskers, 20 emergers & 5 Iconic Cows Total sightings aerial & ground teams = 365 bulls & 27 cows Ave. 1 Tusker sighting every day	
“Tuskers” lost	NIL Confirmed, 3 unconfirmed (2 bulls, 1 cow): 1. AR1 – missing since 15 th January 2017, last seen TE southern boundary, TENP 2. MZ1 – missing since 22 nd April 2017, last seen TW western boundary, TWNP 3. F_KA1 – missing since 3 rd August 2017, last seen (very frail and thin) near Aruba, TENP	
	No. Recovered	
Ivory recovered	129 elephant tusks (largest 38kg / 84lbs) • 23 tusks recvd. from 8 ivory dealers (21 tusks = 90kg), 1 Ele. Poacher (2 tusks = 7kg) Total 9 arrests made – ivory related (KWS / TT) • 106 tusks recvd. from aerial & ground team findings (KWS / TT)	
Elephant carcasses	Fresh (less than 3 weeks old)	Recent (less than 3 months old)
	17 (c of d: 5 poached, 8 natural, 4 unconfirmed)	46 (38 natural, 4 unconfirmed + 4 old)
Total located	TOTAL 63 carcasses located (1 carcass every 13.7 hrs of flight)	
Poacher camp/hides	Fresh - 20	Recent – 3
Arrests	42 - by KWS / TT – (8 ivory dealers, 1 ivory poachers, 13 bush meat poachers, 12 illegal livestock, 8 other)	
Snares/traps recvd.	841 by joint KWS / TT Tembo Teams (35 large, 118 medium, 688 small)	
Human Wildlife Conflict	Along north boundary TENP-Triangle – between Kamungi Cons. & Mito Andei: 447 reported incidents / Ave. 37.25 p/month (elephant 221, leopard 77, Hyena 37, lion 32, venomous snake 29, wild dog 6, crocodile 3, others 42)	
Other Illegal activities seen	210 cattle bomas (125,260 plus cows, 51,100 shoats, 1,500 camels & donkeys, 316 people seen, 18 charcoal kilns – during air recces)	
Written reports to KWS	689 (daily email reports, various communications & monthly reports)	
Meetings & Interaction with KWS	<ul style="list-style-type: none"> 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 	
Other Significant Activities	<ul style="list-style-type: none"> 29 Jan to 4 Feb 18: 20 elephants collared in TE & TW - joint KWS / STE / Tsavo Trust January18: Deployed “Tusker skull” container to KWS, TCA HQ – Voi Research Centre February 18: KWS support TWNP – Tsavo Trust re-vamp Ndawe outpost / IPZ March18: KWS support TWNP - Joint ZSL / Tsavo Trust build of IPZ/NRS HQ offices, water tank March18: Completion of 2 Senior Management houses at Tsavo Trust HQ June 18: KWS support TENP – Tsavo Trust completely rebuild KWS Dakota base L/Cruiser vehicle 7/6/18: 15 Tsavo Trust scouts complete 3 months training at KWS Law Enforcement Academy 1/7/18: Deployment of Tembo 5 mobile wildlife protection team to TENP Triangle & TWNP IPZ July18: Formalization and partnership with Watha community to setup Shirango Conservancy Oct18: Tsavo Trust Research & Monitoring Officer – Joseph Kyalo passed his Private Pilot’s License Dec18: Total rebuild completed by Tsavo Trust of Ngiluni Dispensary – Kamungi Conservancy Dec18: KWS support TENP - Tsavo Trust ongoing buildings/infrastructure at KWS Dakota base 	

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:

- 840 hours per year of project
- 100,000 kilometres per year of project
- 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
- Human Wildlife Conflict mitigation

Ground protection teams desired status used to evaluate accomplishments:

- Significantly reduce elephant poaching
- Arrest 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
- To react to illegal activity inside the Protected Areas
- Human Wildlife Conflict mitigation

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

- Regular monitoring enhances iconic Tusker 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
- Continue to provide a support role to KWS for endangered species monitoring, predator monitoring, and other habitat related monitoring.

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 increase the capacity for Aerial Reconnaissance flights through the addition of a Super Cub aircraft. The aircraft identified is a currently out of service Piper Supercub owned by Tsavo Trust (registration 5Y ACE). Fundraising is ongoing to raise funds to overhaul and recondition this aircraft.
- Completion of pilot training for Tsavo Trust’s head of Research and Monitoring, Joseph Kyalo. After gaining his Private Pilot’s License, Kyalo will now undergo extensive training in low level aerial reconnaissance flying a Super Cub aircraft
- Protection ground operations – the need to upgrade old and well used 4x4 vehicles
- Protection ground operations – security outpost infrastructure developments
- Protection ground operations - enhanced activities through ongoing training
- Monitoring ground operations to be maintained with further training and use of SMART (Spatial Monitoring and Reporting Tool)
- To continue to provide assistance through expanding operations where necessary to partner Community Conservancies bordering the National Park including Kamungi Conservancy and Shirango Conservancy to further engage with the community to improve livelihoods and to protect and conserve the wildlife and habitats of these areas.

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

Private Pilot’s License training for Joseph Kyalo

Long-term employee of Tsavo Trust, Joseph Kyalo Kimaile has led the field monitoring teams for over three years, spending much of his team on patrol in support of the Kenya Wildlife Service with the Tembo 2 unit, and more recently also overseeing Tembo 4 unit. When he joined Tsavo Trust as its third employee in 2014, he was fresh out of internship following his wildlife management degree. He did not have a driving license and he certainly couldn’t fly an aircraft. In 2018 funding was secured to put Joseph through flight training in Nairobi.

Joseph successfully completed his PPL flight training and having passed his final exams he was issued his Private Pilot’s License on 12th October 2018. He is now a licensed pilot and is undergoing further flight training in the Tsavo Trust Supercub aircrafts under the supervision of Nick Trent and Richard Moller. Once Kyalo has gained enough hours of supervised flying in a Super Cub, and he shows excellent competency in low level aerial reconnaissance flying over Tsavo, he will then begin to take on full pilot duties. This is expected to take place by mid 2019 if all goes to plan.



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

During the 12 months of 2018 Tsavo Trust carried out a total of **101,262 kilometres** over **863 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 and Tsavo Trust through this activity provides vital and very significant support to KWS who take the lead role in these activities.

Only 8 bull and 5 cow 'Super Tuskers' are currently known to remain in the Tsavo Conservation Area. A further 20 emerging Tuskers are being monitored, and given the chance to live a full life, they will become the Super Tuskers of tomorrow. We believe that there is no other place on the planet that carries such a strong "Tusker" gene pool as the TCA, and this alone makes this a stand out project, and one worthy of support.

No 'tuskers' have been confirmed lost in 2018, although there are 3 unconfirmed losses - 2 bulls, 1 cow which have not been seen for many months. Tsavo Trust has located a total of **63 elephant carcasses** during the same period and **recovered 129 elephant tusks** from aerial and ground team patrols (including recoveries from arrested dealers and elephant poachers). Again, this is in conjunction with KWS who have always take the lead role.

Tsavo Trust provided aerial and ground assistance alongside KWS and Save The Elephants in an elephant collaring exercise, which resulted in the successful collaring of 20 elephants in February 2018, and had continued to monitor these collared elephants regularly both from the ground and the air.

Ground protection teams (four) have covered **87,513 kilometres** and collected **841 snares** or traps in joint operations with KWS. Ground monitoring teams (team) have covered **63,570 kilometres** of the Tsavo Conservation Area providing regular scientific data from field observations, alongside KWS research and monitoring scientists.



Super Tusker HA1 photographed in Tsavo East National Park. In June 2018 HA1 moved from the Emerging Tusker category to Super Tusker.

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

From January to December 2018 Tsavo Trust flew **863 hours** covering **101,262 kilometres** over Tsavo. **129 elephant tusks** were recovered, and **63 elephant carcasses** were discovered, and **841 snares** recovered. Although poaching remains a real threat to the elephants of Tsavo, the number of poached elephant in 2018 was the lowest on record for over a decade.

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

- **Kenya Wildlife Service (KWS)** – Kenya national wildlife authority and lead agency
- **US Fish and Wildlife Service** - provide co-financing for the Big Tusker Project
- **USAID** – support to Biodiversity protection, and Community Conservancy Development
- **Zoological Society of London (ZSL)** – works closely with Tsavo Trust and KWS on a daily basis across with specific emphases to Rhino conservation in Tsavo West National Park.
- **Save The Elephants** – provide co-financing for the Big Tusker Project, as well as being a collaborative partner.
- **Oak Foundation** – provide co-financing for the Big Tusker Project
- **Leopardess Foundation** - provide co-financing for the Big Tusker Project
- **JM Foundation Africa** - 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's northern boundary. Kamungi Scouts patrol along with the KWS Rangers in Tsavo Trust's anti-poaching ground teams.
- **Shirango Conservancy** – conservation partners bordering Tsavo East National Park's southern boundary. Tsavo Trust 's Tembo 1 team patrols alongside KWS Rangers.



Tsavo Trust Tembo 1 biodiversity protection

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	Actual Costs (US\$)	TOTAL IEF Contribution to Project Costs (US\$)
Purchase of 12 drums Avgas from Nairobi @ \$440* per drum (including transportation costs Nairobi to Tsavo) <i>*Actual cost was less than budgeted amount of \$500</i>	10,560	10,560	10,560
Part contribution to vehicle running costs of Tembo 3 protection team (\$1 per km / including maintenance and fuel) covering 4,440km over the report period <i>*The saving in Avgas of \$720 has been allocated towards vehicle running costs</i>	4,400	4,400	4,440
TOTAL COST US\$	15,000	15,000	15,000

1USD = KES 1

16. Submit at least five high resolution digital images (350kb or over) representative of the Project as separate individual files.

Photos attached:

- Aerial photo of Bull Tusker BA1 – Nov 2018
- Bull Tusker elephant – LU1 – Nov 2018
- Tsavo Trust Super Cub over elephant herd – Dec 2018
- Tsavo Trust HQ – Dec 2018
- Large elephant herd in Tsavo – Dec 2018

17. Submit at least one video clip.

Not currently finalised, work in progress.

We know we are not great on this, we do have technical challenges here in the field, but we do have raw footage often without voice over. We will send an example clip via shared drive.

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

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

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

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

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